

"48 HOURS" DISPUTE—JULY, 1897 TO JANUARY, 1898.

UNIVERSITY OF TORONTO

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LIST

OF THE
FEDERATED ENGINEERING AND
SHIPBUILDING EMPLOYERS WHO
RESISTED THE DEMAND FOR A
48 HOURS' WORKING WEEK.

HD
5367
E 52
1897

WITH SUPPLEMENTARY LIST OF
MEMBERS, No. 1, APPENDED.

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LIST

OF THE
FEDERATED ENGINEERING AND
SHIPBUILDING EMPLOYERS WHO
RESISTED THE DEMAND FOR A
48 HOURS' WORKING WEEK.

THE ENGINEERING EMPLOYERS' FEDERATION,
105 WEST GEORGE STREET, GLASGOW.

HD
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1897



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“48 HOURS” DISPUTE—JULY, 1897 TO JANUARY, 1898.

NOTE.

In response to numerous applications (both home and foreign) for a list of the Firms who took an active part in resisting the demand for a reduction of the working hours from 54 to 48 per week—sought to be enforced by a large section of the workmen in the Engineering Industry of the United Kingdom—this List has been compiled by the Committee of the Engineering Employers’ Federation.

At the commencement of that long and memorable struggle, 180 Firms were involved; but the vital character of the issues brought daily accessions to the Federation, and on the following pages will be found the names of the 702 Firms who *successfully resisted* the attempt to enforce a

REDUCTION OF THE WORKING HOURS,

and who *vindicated*, but only after a prolonged stoppage of work, the Employers’ right to

FREEDOM OF MANAGEMENT.

HEAD OFFICE:

GLASGOW—105 WEST GEORGE STREET,

December, 1898.

“48 HOURS” DISPUTE—JULY, 1897 TO JANUARY, 1898.

The Federated Engineering and Shipbuilding Employers.

EXECUTIVE COMMITTEE

WHO ACTED *IN RE* THE “48 HOURS” DEMAND.

ENGINEERING REPRESENTATIVES.

ENGLAND.

BARROW—

Mr. A. ADAMSON, - - - - - of Messrs. Vickers, Sons & Maxim, Limited.

BOLTON—

Sir B. A. DOBSON, - - - - - , Dobson & Barlow, Limited.

HULL—

Mr. A. E. SEATON, - - - - - , Earle's Shipbuilding and Engineering Co., Limited.

KEIGHLEY—

Mr. J. W. DARLING, - - - - - , Darling & Sellers, Limited.

LEICESTER—

Mr. GEORGE JESSOP, - - - - - , Jessop & Appleby Bros., Limited.

LIVERPOOL AND BIRKENHEAD—

Mr. JOHN LAIRD, - - - - - , Laird Bros., Birkenhead.

LONDON AND DISTRICT—

Mr. JOHN DONALDSON, - - - - - , John I. Thornycroft & Co.

Mr. ALEX. SIEMENS, - - - - - , Siemens Bros. & Co., Limited.

Mr. T. PERCIVAL WILSON, - - - - - , Easton, Anderson & Goolden, Limited.

Ship Repairers' Representative—

Mr. GEO. FLETCHER, - - - - - , 9 London Street, Fenchurch Street, E.C.

MANCHESTER AND DISTRICT—

Colonel HENRY C. S. DYER, - - - - - , Sir W. G. Armstrong, Whitworth & Co., Limited.

Mr. J. W. HULSE, - - - - - , Hulse & Co., Limited.

Mr. JOHN M'QUEEN, - - - - - , John Hetherington & Sons, Limited.

The following List is divided into two Sections.

SECTION I.—Arranged Alphabetically—pp. 10 to 58.

SECTION II.—Arranged under Trade Headings—pp. 59 to 160.

SECTION I.

ARRANGED IN ALPHABETICAL ORDER.

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEP N
					6295
Atlas Engineering Co., The	Engineers and Machine Tool Makers	Chapel St., Levenshulme	Near Manchester	Atla Works, Levens-	
Ayrton, William, & Co.	Engineers and Machinists, etc.	Gorebrook Ironworks, Longsight	Manchester	hulme Spooler, Manchester	
Bailey & Garnett, Ltd.	Machinists	... Eagle Ironworks...	Stalybridge	Bailey & Garnett,	135
Bailey, W. H., & Co., Ltd.	Engineers	... Albion Works, Salford ...	Manchester	Stalybridge ...	
Baldwin, James	... Engineer, Brassfounder and Steam Fittings Maker	Devonshire Brass Works, Park Wood Street	Keighley	Beacon, Salford ...	991
Barclay, Curle & Co., Ltd.	... Shipbuilders and Marine Engineers, Engine, Boiler and Ship Repairers	Shipyard—Whiteinch ...	Glasgow	Baldwin, Engineer,	
		Engine Shop—36 Finnieston Street	... ...	Keighley	
		Boilermaking and Ship Repairing Works—88 Kelvinhaugh Street	... ...	Whiteinch, Barclay, by Glasgow	3193
Barker, John, & Sons, Ltd.	Hoist and Crane Makers	... Park Street Ironworks ...	Oldham	... ...	551
Barlow, H. B., & Co.	Engineers	... Cornbrook Works, Chestnut Road,	Manchester	Barkers, Engineers,	1269
Barns, J. C.	Brassfounder	... Union Street, Borough ...	London, S.E.	Oldham Works, Manchester	75
Barracough, Joseph, & Sons	Ironfounders, Engineers and Brassfounders	Union Foundry ...	... ...	... ...	3685
Barrett, R., & Sons, Ltd.	Iron and Brass Founders	... King's Head Court, Beech Street	Barnsley	Pulley, Barnsley ...	48
Barry, Henry, & Co., Ltd.	Engineers for Transmission of Power and Material	West North Street	London, E.C.	Gunmetal, London ...	9 Ba
Beck & Co., Ltd.	Hydraulic Engineers, Brassfounders, etc.	130 Great Suffolk Street...	Aberdeen	Aberdeen ...	333
Beeley, Thomas	Boilermaker and Engineer	Hyde Junction Ironworks ...	London, S.E.	Barry Henry, Aberdeen	860 H
				Hydrant, London ..	
				Beeley, Hyde ...	

				Paddington
				1262
etc.	Machine Tool Makers	,	..	Bennie, Polmadie, Glasgow
James, & Sons	Machine Stoker and Conveying Plant Engineers	..	..	Bennies, Bolton
Edward, & Co., Ltd.	Deansgate 28	Victoria Street	..	London, S.W.
John, William	Robin Hood Street	..	..	Nottingham
Key & Jackson, Ltd.	Lodge Bank Works	..	Bury	..
De, & Co., Ltd.	Calder Dale Ironworks ..	Sowerby Bridge	Berry, Sowerby Bridge	25
Francis, & Sons	Croydon Works ..	Leeds...	Rivett, Leeds	557
Henry, & Co. ..	Bank Foundry ..	Halifax	Berry, Halifax	341
John	Leith Walk Foundry ..	Edinburgh	Bertram, Leith	521
James, & Son, Ltd.	St. Katherine's Works, Scientes	Edinburgh	Bertram, Edinburgh	645
James, & Sons, Ltd.	Gorton Foundry ..	Manchester	Loco., Gorton	255
Peacock & Co., Ltd.	Tempest Street ..	Wolverhampton	Staffordshire	3004 Burslem
John, J., & Son	Longport ..	...	Bronze, Longport	...
Newton & Newton ..	Victoria Iron Works, Water Lane	Halifax	Bees, Halifax	3191
Brothers ..	Islington Tool Works, Salf. rd	Manchester	Birch, Islington, Salford	
G., & Co. ..	Portobello Foundry ..	...	Sunderland	
J., & Co. ..	Laygate Street ..	South Shields	...	51
John, William ..	Paragon Works, Wood Street	Wakefield	Paragon, Wakefield	
Burn & Crawshaw	Hosiery Machinists ..	Atlas Works	Nottingham ...	Blackboro', Nottingham
Burn, George, & Sons,	..	..	..	..

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
ackburn, Joseph ...	Electrical Engineer and Contractor	Gresham Works ...	Nottingham ...	Blackburn, Nottingham	238
ackburn Loom and Weaving Machinery Making C. (William Dickinson & Sons) Ltd.	Iron and Brass Founders, Makers of Looms, Sizing, Winding, Warping, etc., Machinery	Phoenix Iron Works ... Rose Hill Foundry	Blackburn	Phoenix, Blackburn	11
ackwood & Gordon	Marine Engineers, Shipbuilders, and Boilermakers ; Engine, Boiler and Ship Repairers	Castle Building Yard and Slip	Port-Glasgow	Blackwood Gordon, Port-Glasgow	4
air & Co., Ltd. ...	Marine Engineers, Boilermakers and Ironfounders	Norton Road	Stockton-on-Tees	Blair, Stockton-on-Tees	2 P.O.
ake, Barclay & Co. ...	Engineers ...	Victoria Works	Greenock	Filter, Greenock	12 Nat.
andell's London Copper and Brass Works Co., Ltd.	Engineers, Coppersmiths and Brassfounders	23 25 West India Dock Road, Limehouse	Londen, E. ...	Blundell, London	130
dden, William, & Son ...	Spindle Manufacturers	Hargreaves Works	Oldham	Bodden, Oldham	5
ilton Engineering Co., The	Engineers, Ironfounders ⁸ and Tool Makers	Turton Street	Bolton	Bec, Bolton	191
ilton Iron and Steel Co., Ltd.	Steel Manufacturers ...	Blackhorse Street	Bolton	Hammer, Bolton	161
ilton, Rodger, & Son ...	Brassfounders, Coppersmiths etc. ...	44 and 46 Standishgate ...	Wigan	... ... ...	29
ooth, Joseph, & Brothers ...	Engineers and Crane Manufacturers	Union Foundry and Iron-works, Rodley	Leeds	Cranes, Rodley	20
owen & Co. ...	Engineers, Brass and Aluminium Founders	6 Mount Pleasant, Clerkenwell	London, W.C.	Bowenite, London	623 King's Cross
ow, M'Lachlan & Co. ...	Marine and General Engineers, Boilermakers, Ironfounders and Contractors	Thistle Works	Paisley	Bow, Paisley	6
adbury & Co., Ltd. ...	Sewing Machine and Cycle Makers, and Makers of Automatic and Labour Saving Tools for Engineers	Wellington Works	Oldham	Rotary, Oldham	242
adbury, T. H. ...	Engineer ...	...	...	...	...

ord, T., & Co.	Laundry Engineers ...	... ...	Crescent Ironworks, Sal-	Manchester ...
ey & Craven ...	Brickmaking Machinery / Manufacturers	... ...	Westgate Foundry	Craven, Wakefield ...
ey, R., & Co.	Engineers and Machinists ...	... ...	Victoria Foundry	Boiler, Wakefield ...
ner Machine Co.	Printers' Engineers ...	... ...	Wharfedale Ironworks ...	Bremner, Otley
es, Thomas, & Sons ...	Engineers ...	... ...	Horseley Fields ...	Bridges, Wolverhampton
ey, T., & Co.	Fan Makers ...	... ...	... ...	Brierley, Engineers, Oldham
tside Foundry Co., Ltd.	Ironfounders and Engineers ...	... ...	Newhall Ironworks ...	Castings, Sheffield ...
lbent, T. W.	Electrical Engineer ...	... ...	Victoria Electrical Works	Broadbent, Electrician Huddersfield
lbent, Thomas, & Sons, Ltd.	Engineers and Ironfounders ...	... ...	Central Ironworks, Vulcan Street	Broadbent, Huddersfield
l, G., & Son ...	Bronze and Brassfounders ...	... ...	41 and 42 Windmill St., Tottenham Court Road	Outpouring, London
e, John, & Co., Ltd.	Dry Dock Proprietors, Shipbuilders, Engineers and Boilermakers ...	... ...	13 Fenchurch Buildings ...	Imbat, London
s, T., & Co.	Engineers and Machine Makers ...	... ...	Commercial Dry Dock ...	London, E.C.
ss & Doxey, Ltd.	Textile Machinists ...	... ...	Chapel Hill ...	Rotherhithe Huddersfield
rn Brothers & Co., Ltd.	Engineers and Ironfounders ...	... ...	Registered Office—Union Ironworks, West Gorton Branch Works—Junction Ironworks, Newton Heath	363
rn, John, & Co., Ltd.	Steel Manufacturers ...	... ...	Town Office—15 Market Street	Manchester ...
n's Dry Dock and Engineering Co., Ltd.	Ship Repairers, Marine Engineers and Dry Dock Proprietors	... ...	Rosebank Ironworks, Broughton Road	Union, Manchester Works, 2113
			Atlas Works, Saville Street, East	... ... ... ... ...
			10 London Street	... ... ... ... ...
			Poplar Dry Dock, Wharf Road	... ... ... ... ...
				Town Office 605
				Hydraulic, Edinburgh
				Atlas, Sheffield
				London, E.C.
				London, E. London, E.
				Reparans, London ...
				2494 Avenue

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Browett, Lindley & Co., Ltd.	Steam Engine Makers (See <i>Donkin, Bryan, & Co., Ltd.</i>)	Sandon Works ...	Sandon	Patricroft	... 19 Eccl
Bryan Donkin & Co., Ltd.	Engineers, Millwrights and Iron-founders	Castle Ironworks ...	Oldham	... Engines, Oldham	... 8
Buckley & Taylor	Piston and Lathe Manufacturers ...	Millsands ...	Sheffield	... Wm. Buckley, Shef-field	2232
Buckley, William, & Co.	Engineers and Tool Manufacturers	Meadow Road ...	Leeds	... Bucktons, Leeds	724
Buckton, Joshua, & Co., Ltd.	Engineers ...	Cannock Chase Engine Works	Hednesford	... Bags, Hednesford	
Bumsted & Chandler	Engineers and Boilermakers	Moore Park Boiler Works, Govan	Glasgow	... Burnet, Glasgow	1513
Burnet, Lindsay, & Co.	Machine Tool Makers and Iron-founders	Gibbet Street ...	Halifax	... Buller, Halifax	216
Butler, J., & Co.	Iron and Brassfounders, Makers of Looms for Cotton, Linen and Worsted Goods, Winding, Warping, and Sizing Machines	Globe and Saundar Bank Ironworks; also West Gate Weaving Shed	Burnley	... Globe, Burnley	6, 6A, 6B
Butterworth & Dickinson	Worsted, Woolen, Felt and Twine Machine Manufacturer and Iron and Brass Founder	Sweet Street Foundry ...	Leeds	... Bywater, Leeds	1217
Cywater, William	Marine Engineers and Shipbuilders	Engine Works—Arthur St. Shipyard & Graving Dock ...	Greenock	... Company, Greenock	5
Caird & Co., Ltd.	Engineers and Coppersmiths	777 Commercial Road ...	London, E.	... ...	71
Caird & Rayner	Engineers and Shipbuilders ...	Lilybank Engine Works, Caledon Shipbuilding Yard	Dundee	... Vaporize, London	210 East
Caledon Shipbuilding and Engineering Co., Ltd. (late W. B. Thompson & Co., Ltd.)	Engineers and Shipbuilders ...	... ...	... ...	... Caledon, Dundee	270
					558

Calender's Cable and Construction Co., Ltd.	Electrical Engineers, etc.	... 90 Cannon Street Factory—Belvedere, ...	London, E.C.	Calender, London ...	5133 Bank 11 Wool
Calvert & Co. ...	Ironfounders, Engineers and Millwrights	Hope Foundry and Rashcliffe Ironworks	Huddersfield	...	171
Calvert, T. C. ...	Ironfounder ...	Pallion Foundry ...	Sunderland	Calvert, Pallion Foundry, Sunderland.	
Cameron, John ...	Maker of Steam Pumps and Ship-builders' Tools	Oldfield Road Ironworks, Salford	Manchester	Original, Manchester	2002
Cammell, Charles, & Co., Ltd.	Steel Manufacturers ...	Cyclops Works, ...	Sheffield	Cammell, Sheffield ...	
Campbell & Calderwood	Marine and General Engineers, and Centrifugal Pump Makers	Soho Engine Works	Paisley	Soho, Paisley	874
Campbells & Hunter ...	Engineers and Machine Tool Makers	Dolphin Foundry, Saynor Road, Hunslet	Leeds	Dolphin, Leeds	162
Campion Cycle Co., Ltd.	Cycle Manufacturers ...	Liverpool Street ...	Nottingham	Campion, Nottingham	551
Carmichael, James, & Co., Ltd.	Engineers, Millwrights, Boilermakers and Forgemasters	Ward Foundry ...	Dundee	Corliss, Dundee	363
Carrick & Ritchie ...	Engineers, Crane & Turbine Makers	Waverley Ironworks, Norton Park, London Road	Edinburgh	Crane, Edinburgh	853
Carrick & Wardale ...	Engineers and Founders ...	Redheugh Engine Works	Gateshead-on-Tyne	Wardale, Gateshead	11027
Carruthers, J. H., & Co.	Steam Pump Manufacturers	Hamilton St., Polmadie	Glasgow	Hoisting, Glasgow ...	3601
Carter Brothers ...	Engineers and Millwrights ...	Bridge Street Ironworks	Rochdale	Carter Brothers,	
Carter, James, & Sons ...	Iron and Brass Founders ...	Atlas Works ...	Stalybridge	Rochdale	106
Central Marine Engine Works, The (Sir W. Gray & Co., Ltd.)	Marine Engineers, Boilermakers, Iron and Brass Founders, Makers of Forgings, Stampings and Evaporators, Dry Dock Owners and Ship Repairers	Central Engine Works ...	West Hartlepool	Central, West Hartlepool	18 P.O. 248 Nat.
Chadburn & Son, Ltd.	Ships' Telegraph Manufacturers ...	11 Waterloo Road	Liverpool	Chadburn, Liverpool	826
Chadwick, James ...	Ironfounder and Range Maker	School Hill Ironworks ...	Bolton	...	...
Chaplin, Alexander, & Co. ...	Engineers and Cranemakers ...	Helen Street, Govan ...	Glasgow	Chaplin, Glasgow ...	147

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Chapman, Carverhill & Co. ...	Iron and Brass Founders ...	... Dunn Street ...	Newcastle-on-Tyne	... ... ...	1189 Nat.
Chapman & Furneaux (late Black, Hawthorn & Co.)	Locomotive Builders, etc ...	... East Street Works ...	Gateshead-on-Tyne	... ... ...	126 P.O. 2116 Nat.
Charlesworth, S., & Co. ...	Electrical and Printers' Engineers ... Machinists, etc. Hydraulic and General Engineers and Founders	Richmond Hill Ironworks Werneth Works—New Cross Road, near S.E. Ry. Station City Office—22 Queen St., Cheapside	Oldham	Charlesworth, Engineers, Oldham ...	63 120 Deptford
Carke, Chapman & Co., Ltd.	Electrical and General Engineers ...	Victoria Works, St. James Road Southwick ...	Gateshead-on-Tyne ... Sunderland ...	Cyclops, Gateshead ... Clark, Sunderland	137 and 138 4 P.O. 21 Nat.
Carke, George, Ltd. ...	Marine Engine and Boiler Builders ...	Raglan Foundry ...	Bradford	Clarke, Havelock	
Carke, J. & T. ...	Engineers, Millwrights, Brass and Ironfounders ...	Havelock Works ...	Leicester	Works, Leicester	
Carke, T. A W. ...	Engineer and Machine Maker ...	Atlas Ironworks ...	Blackburn	Goodfellow, Blackburn	27
Dayton, Goodfellow & Co., Ltd.	General Engineers and Millwrights ...	Atlas Works, Woodfield Road, Harrow Road Hunslet ...	London, W. ... Leeds ...	Brickpress, London ... Gas, Leeds ...	... ...
Dayton, Howlett & Co. ...	Engineers and Ironfounders ...	... ...	Near Huddersfield	Cliffe, Milnsbridge ...	
Dayton, Son & Co., Ltd. ...	Makers of Gas Holders, Boilers, and all kinds of Constructional Ironwork ...	Longwood ...	London, W.	Infusible, London	22 Milnsbridge
Deiffe & Co. ...	Woollen Machine Makers ...	51 Sinclair Road, Kensington ...	Clydebank, N.B.	Shipyard, Clydebank	812 Glasgow
Deiffit, E. H. ...	Electrical Engineer and Motor Car Maker	... ...			1 Clydebank
Glydebank Engineering and Shipbuilding Co., Ltd., The	Marine Engineers and Shipbuilders ...	... ...		
Yyne, Mitchell & Co. ...	Engineers and Boilermakers ...	Commercial Road ...	Aberdeen ...	Clyne Mitchell, ...	438

Coates, Victor, & Co., Ltd.	Engineers, Boilermakers and Lagan Foundry ...	Belfast	... Lagan Foundry, Belfast	93
Founders	... Founders	Birkenhead	... Multitube, Birkenhead	12
Engineers, Boilermakers, Steam	54 Duke Street and	Birkenhead	...	
Launch and Boatbuilders, Iron-	Bidston Wharf			
founders, Brassfounders	and			
Shipsmiths	132 M'Neill Street	Glasgow	... Cockburn, Glasgow	1281
Safety Valve Maker	... Sussex Street, Kinning	Glasgow	... Pressure, Glasgow	1854
Cockburn, George, & Co.	... Park	London, E.	... Slidevalve, London	277 Eastern
Cole, T. & W.	Engineers and Boilermakers	St. Ann's Rd., Burdett Rd.	... Combe, Belfast	18 and 19
Combe, Barbour & Combe,	Machinists, Engineers and Mill-	... ...	... Belfast	
Connell, Charles, & Co.	Shipbuilders ...	... ...	... Glasgow	1192
Cook, S., & Co.	Springmakers and Machinists	... Albert Works	... Bury	30
Cooke, W.	... ...	... Lenton Boulevard	... Nottingham	515
Cooper Brothers, Ltd.	... Loom Makers ...	... Bethesda Street Foundry	... Burnley	141
Corinthian Engineering Co.,	... ...	... Grant Street	... Nottingham	
The				
Cotton, Stephen, & Co.	Machine Makers and Ironfounders	... ...	... Belfast	Stephen Cotton, Belfast
Coubro & Scrutton	Engine and Shipsmiths, Mastmakers,	18 Billiter Street ...	... London, E.C.	5007 Eastern
Coulthard, T., & Co.	Joiners and Shipwrights	11 West India Dock Rd.	... London, E.	
Coulthurst, H. J. & A.	Printing Machine Makers ...	... Cooper Road	... Preston	140
Cowans, Sheldon & Co., Ltd.	Engineers and Millwrights ...	... Robert Street Foundry	... Darwen	11
	Crane and Turntable Manufacturers	St. Nicholas Works	... Carlisle	St. Nicholas, Carlisle
Cowen, G. R., & Co.	Engineers, Founders and Boiler-	Beck Works	... Nottingham	Cowen, Nottingham
Craig, A. F., & Co., Ltd.	makers	... ...	... ...	Craig, Paisley
				Paisley
				87
				20

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.		TELEPHONE No.
				71 Deptford		
Deptford Dry Docks Co., Ltd.	Engineers and Ship Repairers	Deptford ... City Office—88 Bishopsgate Street	London, S.E.	Shoring, London	...	
Dewhirst, C. H.	Gas Engine Maker	Gas Engine Works	London, E.	Dewhirst, Engineer, Keighley	...	
Dewrance & Co.	Engineers, Makers of Engine and Boiler Fittings for High Pressure Steam	158 Great Dover Street ...	London, S.E.	Dewrance, London	...	
Dickinson, John, & Co.	Engineers and Machine Tool Makers	Devonshire Works	Keighley	Dickinson, Keighley	...	45
Dickinson, John, & Sons, Ltd.	Engine and Boiler Builders	Palmer's Hill Engine Works	Sunderland	Bede, Sunderland	...	24 P.O.
Dickson, J. W.	Brassfounder	66 Plumber's Row, Whitechapel	London, E.	...	...	20 Nat.
Dixon, S., & Son	Brassfounders	Swinegate ...	Leeds	Brass, Leeds	...	197
Dobson & Barlow, Ltd.	Makers of Cotton Spinning Machinery	Key Street Works	Bolton	Dobson's, Bolton	...	43
Dodd, Samuel	Machinist	Lyon Works, Werneth ...	Oldham	Dodd, Oldham	...	162
Donkin, Bryan, & Co., Ltd.	Gas and General Engineers, Millwrights, Founders and Machinists	55 Southwark Park Road, Bermondsey	London, S.E.	Donkin Company, London	...	662 Hop.
Douglass Brothers, Ltd.	Iron Manufacturers	Globe Ironworks ...	Blaydon-on-Tyne	Douglass, Blaydon ...	...	6222
Douglas Forge Co., Ltd.	Engineers and Ironfounders...	Scholes Bridge ...	Wigan	...	...	54
Douglas Fraser & Sons	(See <i>Fraser, Douglas, & Sons</i>)		...	...	...
Dougill, Alf., & Co., Ltd.	Gas and Oil Motor, Hydraulic, Steam and Hot Water Engineers	35 and 36 Great George St.	Leeds	Dougill, Leeds	...	386
Downham, J., & Co.	Bleachers' Engineers ...	Barnbrook Ironworks	Bury	...	Barnbrook, Bury	...
Doxford, W., & Sons, Ltd.	Ship and Engine Builders	Pallion Yard	Sunderland	Doxford, Sunderland	...	37
Dronsfield Brothers, Ltd.	Card Grinding Machinists	Atlas Works	Oldham	Atlas, Oldham	...	413 & 414 Na
Dryden, Thomas	Millwright and Engineer	Grimshaw Street Foundry	Preston	Dryden, Preston	...	57

Dubs & Co.	Locomotive Engine Builders ..	Glasgow Locomotive Works ..	Glasgow ...	Dubs, Glasgow ...	702
Duncan, Robert, & Co., Ltd....	Shipbuilders, Ship Repairers, Mast and Spar Makers ..	Inch Works ...	Port-Glasgow ...	Duncan, Port-Glasgow	59
Dunlop, David J., & Co., ...	Marine Engineers, Boilermakers and Shipbuilders ..	Windsor Street, Govan ...	Port-Glasgow ...	Inch, Port-Glasgow	8
Dunsmuir & Jackson ...	Marine Engineers and Boilermakers ..	... ...	Port-Glasgow ...	Dunsmuir Jackson, Glasgow	1564
Dunston Engine Works Co., The	Engineers and Boiler Builders ..	... ...	Dunston-on-Tyne ...	Archer, Dunston-on-Tyne	1287
Dykes, G. & J.	Engineers ...	Bury Ground Ironworks	Bury		
Earle's Shipbuilding and Engineering Co., Ltd.	Engineers, Shipbuilders and Boiler-makers ..	... ...	Hull ...	Earles, Hull ...	61 and 78
Easton, Anderson & Goolden, Ltd.	Millwrights, Steam, Electric and Hydraulic Engineers, Boiler-makers and Founders ..	Erith Iron Works, Broad Sanctuary Chambers, Westminster	Erith, Kent ...	Eastons, Erith Egyptian, London ...	4 Dartford West-mill
Eastwood, Walter ...	Brassfounder ...	Globe Brass Works ...	London, S.W. ...	London ...	545
Eclipse Machine Co., Ltd. ...	Cycle, Sewing and Knitting Machine Makers (See <i>Allen, Edgar, & Co., Ltd.</i>)	Rochdale Road ...	Ashton-under-Lyne ...	Ashton-under-Lyne ...	4 Dartford West-mill
Edgar Allen & Co., Ltd. ...	Iron and Brass Founders ...	The Bow Foundry, Bow Victoria Foundry, Canning Town, E.	Oldham ...	Eclipse, Oldham	31 Stratford
Edie, Henry, & Co.	Engineers to Bleachers, Dyers, etc.	Cannon Street Iron Works, Adelphi, Salford	London, E. ...	London ...	31 Stratford
Edmonton, Archd., & Sons ...	Electrical Engineer ...	Globe Electrical Works, Kirkstall Road	Manchester ...	Edmonton, Adelphi, Salford	1595
Edmondson, John A. ...	Engineers and Tool Makers ...	Hercules Iron Works ..	Leeds ...	Armature, Leeds ...	1086
Edwards, George, & Co.		Johnstone ...	Johnstone ...	Edward, Johnstone	

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.		TELEPHONE No.
				TELEGRAPHIC ADDRESS.		
Frost & Sons ...	Brassfounders ...	8 Allen Street, Goswell Rd	London, E.C.	Vulcan, Paisley	...	63
Fullerton, Hodgart & Barclay, Ltd.	Engineers, Millwrights, Ironfounders, and Makers of Hydraulic Machinery	Vulcan Foundry & Engine Works	Paisley	Middlesbro'	Westgarth, Middlesbro'	21 P.O. 202 Nat.
Furness, Sir C., Westgarth & Co., Ltd.	Marine and General Engineers and Boilermakers	Commercial Street	...	...	...	30 Stockport
Furnival & Co. ...	Printers' Engineers ...	Reddish Ironworks, near Stockport	Manchester	Furnival, Reddish	...	
Gadd, Thomas (Hulse & Co., Ltd., Proprietors)	Millwrights and Machinists	Ordsall Works, Regent Bridge, Salford	Manchester	...	Gadd, Manchester	1427
Galloway, Ltd. ...	Engineers and Boilermakers	Knott Mill Ironworks ... Branch Ironworks, Ardwick	Manchester	...	Galloway, Manchester	195 195A
Gazelle Cycle Co.,	Cycle Manufacturers ...	17 Philpot Lane ... Russell Street ...	London E.C.	...	Rougt, London ... Gazelle, Nottingham	2866 Avenue 799
General Electric Co., Ltd., The	Electrical Engineers and Manufacturers	Peel Works, Adelphi, Salford.	Manchester	...	Sparkless, Manchester	2186
Gibson, J., & Co.,	General Pattern Makers, Machine Joiners and Wood Turners	Warehouse and Showroom—Electricity Buildings, Victoria Bridge	...	...	Induction, Manchester	1643
Gimson & Co. (Leicester), Ltd.	Engineers, Ironfounders, Boiler-makers and Machinists	Alpha Street, Dewsbury Road	Leeds	...	Patterns, Leeds	180
Gimsons, Ltd. ...	Engineers and Millwrights ...	Vulcan Works	Leicester	...	Gimson, Leicester	6 and 734
Ginnan, R., & Son ...	Engineers ...	Stalybridge	...	...	...	120
		Eton Road	Plumstead, Kent		Ginnans, Founders, Plumstead, Kent	

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).			TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
		Brooke Street	Street	Works, Holborn			
Gwynne & Co. ...	... Hydraulic and General Engineers ...	... Makers of Looms and Preparation Machinery	Lord Street	...	Bury ...	Hacking, Bury	31
Hague, B., & Co.	... Hosiery Machine Maker	... Hosiery Machine Maker	Roden Street	...	Nottingham ...	...	556
Haigh, John, & Sons, Ltd.	Machinists ...	... Sawmill Engineers ...	Firth Street	...	Huddersfield	Haighs, Machinists, Huddersfield	111
Haigh, W. B., & Co., Ltd.	Ironfounders and Cast Iron Pipe Makers	... Shipbuilders, Engineers and Boiler-makers	Globe Iron Works, Plane Street	...	Oldham	Haigh, Oldham	146
Haley, E. & W. H.	... Engineers and Makers of Refrigerating Machinery	... Electrical and General Engineers ...	Thornton Road	...	Bradford	Castings, Bradford	467
Hall, A., & Co.	... Engineers and Makers of Refrigerating Machinery	... Electrical and General Engineers ...	York Street	...	Aberdeen	Hall, Aberdeen	290
Hall, J. & E., Ltd.	... Ironfounders and Machinists ...	Dartford Ironworks ... 23 St. Swithin's Lane	Dartford	...	Dartford	Dartford, Dartford	7
Hall, J. P., & Co.	... Engineers, Boilermakers and Ship-builders	Blackfriars Ironworks, Werneth	London	...	London	London, London	846
Hall, John, & Son	... Makers of all kinds of Worsted Machinery and Machines for Mohair and Silk	Union Ironworks, Park St.	Oldham	...	Oldham	Dynamo, Oldham	300
Hall, Russell & Co. Ltd.	... Tool Maker ...	York Place	...	Aberdeen	...	Ironfounders, Oldham	161
Hall & Stells	... Shipbuilders	Park Works	...	Keighley	...	Hal Russell, Aberdeen	273
Hamer, S. H.	... (See Woods, Hamilton, & Co., Ltd.)	...	...	Stells, Keighley	...	Stells, Keighley	10
Hamilton, William, & Co.	... Engineers, Shipbuilders, and Iron-founders	The Lathe Chuck Works, Range Lane	Halifax	...	...	Hamer, Range Lane Halifax	23
Hamilton, Woods & Co., Ltd.	... Engineers, Shipbuilders, and Iron-founders	Glen Shipbuilding Yard	Port-Glasgow	...	...	Hamilton, Port-Glasgow	23
Hanna, Donald & Wilson	... Engineers, Shipbuilders, and Iron-founders	...	...	...	...	Donald, Paisley	72

... & Co., Ltd.	Engineers	... / ...	Blaydon Ironworks	... Blaydon-on-Tyne	29 Nat.
Harfield & Co., Ltd.	... Engineers	... / ...	Arundel House, Victoria Embankment	... Harfield, London	
Hargreaves, Lloyd	... General Patternmaker	... / ...	Gibbet Hill	... Halifax	
Harling & Todd	... Ironfounders, etc.	... / ...	Rosegrove Ironworks	... Burnley	190
Harpers, Ltd.	... Makers of Accessories for the Transmission of Power	... / ...	... / ...	... / ...	549
Harrison Engine Co., Ltd., The	... Engineers and Steam Steering Gear Makers	... / ...	Ocean Works, Cross Lane	... Manchester	1734 Nat.
Harrison & Hammond	... Engineers and Ironfounders	... / ...	Vicarage Street Works	... Iron Wakefield	71
Hartley, Binns & Co.	... Engineers' Tool Makers	... / ...	West End Tool Works	... Halifax	
Hartnell, Wilson	... Electrical Engineer	... / ...	Volt Works	... Leeds	282
Harvey, G. & A.	... Engineers, Millwrights, Machine Tool Manufacturers, & Factory Architects	... / ...	Albion Works, Woodville Street, Govan	... Glasgow	1594
Haswell, J. Stenson, & Co.	... Electrical and General Engineers	... / ...	Watling Street	... Leicester	
Hathorn, Davey & Co.	... Pumping Machinery for Mines and Water Works; Makers of Hydraulic Plant	... / ...	Sun Foundry	... Leeds	524
Hattersley, G., & Sons, Ltd.	... Loom Makers, and Makers of Weaving Machinery of every description	... / ...	North Brook Works	... Keighley	6
Hawthorn & Co., Ltd.	... Engineers, Shipbuilders and Forgers	... / ...	Leith Engine Works	... Leith	431
Hawthorn, R. & W., Leslie & Co., Ltd.	... Masters	... / ...	Granton Iron Works	... Granton	433 P.O.
	Marine Engineers, Locomotive Builders and Shipbuilders	... / ...	St. Peter's...	... Newcastle-on-Tyne	1233 Nat.
			Hebburn	... / ...	370 P.O.
				... / ...	1099 Nat.
Haxby & Sewell	... Ironfounders	... / ...	Bowling Green Foundry, Well Lane	... Halifax	
Hayward Brothers & Eckstein Ltd.	... Engineers and Ironfounders	... / ...	187-193 Union St., Borough	... London, S.E.	193 Hop.
Heald, John	... Engineer, Millwright, Ironfounder and India Rubber Machinist	... / ...	Phoenix Foundry	... Chorley	John Heald, Chorley

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TEL. GRAPHIC ADDRESS.	TELEPHONE NO.
Heap, William, & Co., Ltd. ...	Engineers' Tool Makers ...	Oldham Road Tool Works	Ashton under-Lyne	W. Heap, Ashton-under-Lyne	
Henderson, D. & W., & Co. ...	Marine Engineers and Shipbuilders, Engine, Boiler and Ship Repairers	Engine Shop—190 Elliot St. Shipyard, Graving Dock, & Slip Dock—Meadow-side, Partick	Glasgow	Finnieston, Glasgow 3343 3029	
Henderson, John M. ...	Engineer, Cramemaker, Contractors' Quarriers' and Stoneworkers' Machinery Maker	207 King Street and 104 West North St. (Goods)	Aberdeen	162	
Henley's, W. T., Telegraph Works Co., Ltd.	Electrical Engineers, etc.	27 Martin's Lane, Cannon Street	London, E.C.	Cranes, Aberdeen ... A. B. C. (4th ed.) and Engineering Tel. Codes used.)	
Herbert, E. G. ...	Engineers' Tool Maker	Cornbrook Park Works, Manchester	Heth, Manchester	Henley's Works, London	
Hetherington, John, & Sons, Ltd. ...	Cotton, Wool and Silk Machinists and Heavy Tool Makers ...	Cornbrook Vulcan and Ancoats Works—Pollard Street Phoenix Works—Chapel Street	Manchester	230, 1365 and 1783 383	
Hick, Hargreaves & Co., Ltd. ...	Engineers, Boilermakers and Millwrights	Phoenix Works, Crook Street	Bolton	Hick, Bolton	16
Higginbottom & Mannock ...	Crane and Hoist Makers ...	Crown Iron Works, West Gorton	Manchester	Crown, Gorton Brook	1577
Hill, F. J. ...	Engineer, Gas Engine Expert ...	13 Bath Lane	Leicester	...	...
Hind & Lund, Ltd. ...	Flour and Rice Mill Engineers, Grinding and Paint Mill Machinists	Atlas Works, Edward St.	Preston	...	543
Hodge, Samuel, & Sons, Ltd. ...	Boilermakers, Engineers and Ship Repairers	Union Ironworks, Millwall	London, E.	...	125
Hodges & Todd ...	Electrical Engineers ...	30-42 Hampstead Road	London, N.W.	Hodge, Millwall	
Hodgson, H. E., & Co. ...	Engineers, Machine Tool Makers, and Makers of Wire Machinery	Brookhouse Works	Cleekheaton	Ammeter, London	5115 Gerrard
Holden & Brooke, Ltd. ...	Engineers and Injector Manufacturers	Sirius Works, Heywood Street, West Gorton	Manchester	Hodgson, Brookhouse Cleckheaton	8324
Holdsworth & Sons ...	Boilermakers ...	Leeds Road	Bradford	Influx, Manchester	3663
				Holdsworth, Boiler-makers, Bradford	446

Holiday, Read, & Sons, Ltd.	Electrical and General Engineers	...	...	...	Huddersfield	Huddersfield	115
Holmes, C. D., & Co.	Engineers, Boilermakers and Ship Repairers	Alfred Street	...	Hull	Compound, Hull	...	345
Holmes, J. H., & Co.	Manufacturing Electrical Engineers and Contractors	Portland Road	...	Newcastle-on-Tyne	Holmes, Newcastle-on-Tyne	1226, P.O.	278
Holroyd, Horsfield & Wilson, Ltd.	Engineers	17 Soho Square	...	London, W.	Vermillionette, London	269 Gerrard	25 Nat.
Holroyd, John, & Co., Ltd.	Tool Makers, Engineers and Machinists	Examiner Buildings, Strutt Street	...	Manchester	Compound, Manchester	...	...
Holt, Thomas, Ltd.	Textile Machinists	27 Bothwell Street	...	Glasgow	Efficiency, Glasgow	4984	4984
Hopkinson & Cope	Printers' Engineers, etc.	Larchfield Foundry	...	Leeds	Larchfield Foundry, Leeds	...	534
Horner, George	Flax Machine Maker, Engineer, Millwright and Ironfounder	Hosiery and Lace Machine Builders	...	Near Rochdale	Knit, Milnrow	...	206 Rochdale
Hosiery Machine Building Co., The, (Kiddier Brothers)	Machine Makers, Brass and Ironfounders	Perseverance Works, Milnrow	...	Rochdale	Atlas, Rochdale	...	122
Houston & Hamilton	Engineers	Albion Works, no3 Farrington Road	...	London, E.C.	Wharfedale, London	...	607 Holborn
Howden, James, & Co.	Ironfounders, Millwrights and Machine Makers	Clonard Foundry	...	Belfast	Horner, Belfast	...	107
Hoyle, Elkanah, & Sons, Ltd.	Machine Makers	Bell Street Works	...	Nottingham	Machine, Nottingham	...	143
Hoyle & Preston	Machine Tool Makers	Belfast Foundry	...	Belfast	Belfast Foundry, Belfast	...	550
Hudson, Hall & Griffith (late W. Hudson & Co.)	Locomotive Engine Makers	195 Scotland Street	...	Glasgow	Howden, Glasgow	...	1467
Hudswell, Clarke & Co.	Machine Tool Makers	Waterside Works	...	Halifax	Elkanah, Halifax	...	183
Hulse & Co., Ltd.	Cycle Manufacturers	Globe Works	...	Keighley	Combs, Keighley	...	30
Humber & Co., Ltd.	...	Dalton Tool Works, Fleece Street	...	Keighley	Hudson, Toolmakers, Keighley	...	126
		Railway Foundry	...	Leeds	Loco, Leeds	...	504
		Ordsall Works, Regent Bridge, Salford	...	Manchester	Eshluh, Manchester	...	1427
		Beeston	...	Nottingham	Humber, Beeston	...	1222

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Humber, Syner & Co., Ltd.	Cycle Manufacturers	Crocus Street ...	Nottingham	Humber, Crocus St., Nottingham	765
Humphrys, Tennant & Co. ...	Marine Engineers	Deptford Pier ...	London, S.E.	Humphrys, London	27 Deptford
Hunslet Engine Company, The	Engineers and Locomotive Builders	Hunslet Engine Works ...	Leeds	... Engine, Leeds	528
Hunter & English ...	Engineers, Millwrights, Iron and Brass Founders	202 Bow Road, Bow	London, E.	Venator, London	6045 Stratford
Hutchinson, Hollingworth & Co., Ltd.	Loom Makers	Dobcross Loom Works, ...	Dobcross	Foundry, Dobercross ...	1710
	Woollen and Worsted Preparing Machinery	Atlas Works, Colne Road	Huddersfield	Atlas, Huddersfield	143
Ince Forge Co. ...	Iron and Steel Forgings	Ince Forge ...	Wigan	Forgings, Wigan	47
Inglis, A. & J. ...	Marine Engineers and Shipbuilders. Engine, Boiler and Ship Repairs	Engine Shop—64 War-roch Street Shipyard and Slip Dock —Porthouse	Glasgow	Inglis, Glasgow	1328
			...	...	3988
Jackson & Brother ...	Engineers, Millwrights, Boiler-makers, Iron and Brass Founders, Bleachers' and Dyers' Machinists	Wharf Foundry	Bolton	Jackson, Bolton	34
Jackson, P. R., & Co., Ltd.	Engineers (Electrical and Mechanical), Steel and Iron Founders, Makers of Dynamos and Motors	Salford Rolling Mills, Salford	Manchester	Jackson's, Manchester	623
Jardine, John ...	Lace Machine Builder ...	Deering Street Works ...	Nottingham	Jardine, Nottingham	295
Jefferson, Joseph, & Brothers	Machine Makers, Iron and Brass Founders	Brown Royd Works, Thornton Road	Bradford	... ... ...	518

Jessop & Appleby Brothers (Leicester and London), Ltd.	Coppersmiths, etc.	Dorougu ^u	Leicester	Jessop, Leicester	73
Jessop, Wm., & Sons, Ltd.	General Engineers	St. Margarets	Leicester	... Jessop, Leicester	152 and 2076
Johnson & Phillips	Steel Manufacturers	Brightside Works	Sheffield	Jessops, Sheffield	1010 Avenue 23 Woolwich
Johnson, Thomas, & Co.	Electrical, Telegraphic and Hy- draulic Engineers	Victoria Works	Old Charlton	Juno, London	162 Eastern
Johnson, William, & Sons	Ship Joiners, Shipwrights, Saw Millers, Timber Merchants, and Builders of Insulated Chambers	Gun Lane Saw Mills, Limehouse	London, E.	Buxus, London	...
Johnston, R., & Co., Ltd.	Brick Grinding and Milling Machinery Manufacturers	Castleton Foundry	Leeds	... Ronksley, Armley	387
Jones, John, & Sons	Brassfounders	28 Little Alice Street	London, E.	Steamship, Liverpool	198 and 199
Jopling, E., & Sons	Shipbuilders, Marine and Hydraulic Engineers, Boilermakers, Forge and Founders	Cotton Street	Liverpool	...	352 Nat.
	Iron and Steel Founders	Dunning Street Foundry	Sunderland	Castings, Sunderland	
Keighley Electrical Engineering Co., Ltd., The	Electrical Engineers	Alexandra Works,	Keighley	Electric, Keighley	113
Keighley Engineering Co.	Engineers, Lathe and Machine Tool Makers	Waddington Street	Keighley	Engineering, Keighley	...
Keighley, George	... Looms, Winding, Warping and Sizing Machine Maker	Bank House Ironworks, Woodfield	Burnley	... ...	172 and 172A
Kendall & Gent	Machine Tool Makers	Victoria Works, Belle Vue	Manchester	Tools, Manchester	5147
Kendall, G. H., & Co.	Brassfounders and Engineers	... ...	Huddersfield	...	
Kenworthy, Royston & Co.	Machinists	East Parade	Huddersfield	...	184
Kenworthy, Taylor & Co.	Engineers, Iron and Brass Founders	Barnsley Foundry	Barnsley	Kenworthy, Taylor	

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Kerr, Stuart & Co. ...	Engineers and Ironfounders...	California Works Head Office—20 Bucklersbury Mansion House Bell Street Works ...	Stoke-on-Trent London, E.C. Nottingham ...	California, Stoke-on-Trent Machine, Nottingham	2013 143
Kiddier Brothers (The Hosiery Machine Building Co.)	Hosiery and Lace Machine Builders	Globe Works, Waterway Street Perseverance Works, Elland Road East Hamilton Street ...	Nottingham Leeds... Greenock ...	Kiddier, Nottingham ... Kincaid, Greenock ...	252 1237 95
Kiddier, J., & Son ...	Hosiery Machinists ...	Albert Screw Works, Meadow Lane 101 Leadenhall Street ...	Leeds... London Essex ...	Hexagon, Leeds ...	541.
Kilburn, R., & Sons ...	Ironfounders and Machine Makers...	Lark Street Brassworks...	Bolton	Compactum, London Kirkaldy's Works Nettewell Cross Brass, Bolton ...	96
Kincaid, John G., & Co. ...	Marine Engineers, Boilmakers, Smiths, Ironfounders, and Ship Repairers	Kirkstall Forge ...	Near Leeds ...	Forge, Kirkstall ...	147
Kirby Banks Screw Co., Ltd.	Bolt and Screw Manufacturers ...	Airedale Foundry ...	Leeds...	Airedale, Leeds ...	511
Kirkaldy, John, Ltd. ...	Makers of Marine Auxiliary Machinery	Valley Works, Valley Road, and Canal Road	Bradford	... ... ...	1447
Kirkham, J. & W. ...	Brassfounders ...	...	...	...	...
Kirkstall Forge Co. ...	Iron and Steel Manufacturers ...	...	...	...	...
Kitson & Co. ...	Locomotive and General Engineers	...	...	...	...
Kitson J., & Sons, Ltd. ...	Engineers ...	...	...	...	...
Laird Brothers ...	Shipbuilders, Engineers and Boiler-makers	Birkenhead Ironworks ...	Birkenhead	Laird, Birkenhead ...	3
Lambeth Brass and Iron Co., Ltd., The ...	Hydraulic, Sanitary and Gas Engineers, Brassfounders, etc.	Short Street, Lambeth ...	London, S.E.	Diaphragm, London	796 Hop

Lang, John, & Sons ...	Tool Makers ...	... / ... / ...	... / ... / ...	Mary Street	... / ...	Johnstone ...	... / ...	Lang, Johnstone	... / ...	12
Larmuth, Thomas, & Co. ...	Engineers ...	... / ... / ...	... / ... / ...	Todleben Ironworks, Cross Lane, Salford	... / ... / ...	Manchester ...	... / ...	Hirnant, Manchester	... / ...	956
Lawson, J. ...	Brassfounder ...	... / ... / ...	... / ... / ...	80 St. John Street	... / ... / ...	London, E.C.	... / ...	Leeds...	... / ...	101
Lawson, S., & Sons ...	Flax, Tow, Hemp and Jute Machine Manufacturers, and Engineers Woolen and Asbestos Machinists ...	... / ... / ...	... / ... / ...	Hope Foundry ...	... / ... / ...	Leeds...	... / ...	Lawsons, Leeds	... / ...	...
Leach & Co. ...	Engineers ...	... / ... / ...	... / ... / ...	Victoria Works, Water St.	... / ... / ...	Rochdale ...	... / ...	Leach, Water Street, Rochdale	... / ...	...
Edward, T., & Co. ...	Ironfounders, Engineers and Machine Makers	... / ... / ...	... / ... / ...	35 Queen Victoria Street	... / ... / ...	London, E.C.	... / ...	Preference, London	... / ...	5490 Bank
Lee, Croll & Co. ...	Hydraulic Engineers ...	... / ... / ...	... / ... / ...	28 Deansgate ...	... / ... / ...	Manchester ...	... / ...	Vacuum, Manchester	... / ...	3857
Leeds Engineering and Hydraulic Co., The	Steel Manufacturers, Makers of Furnaces for Marine and Land Boilers, Pressed Steel Under Frames, and Bogies for Railway Rolling Stock	... / ... / ...	... / ... / ...	Lawside Foundry, Lochie Providence Works, Stamford Street	... / ... / ...	Near Dundee ...	... / ...	...	... / ...	882
Leeds Forge Co., Ltd. ...	Millwrights, Engineers and Machine Makers	... / ... / ...	... / ... / ...	Armley ...	... / ... / ...	Leeds...	... / ...	Pumps, Leeds	... / ...	786
Leeds Machinery Stores Co., Ltd., The (Rawlinsons, Ltd.)	Millwrights, Engineers, Boilermakers and Shipbuilders	... / ... / ...	... / ... / ...	Hope Works, Kirkstall Road	... / ... / ...	Leeds...	... / ...	Vulpes, Leeds	... / ...	107
Lees, Anderson & Co. ...	Machinists (Textile) ...	... / ... / ...	... / ... / ...	100 Clyde St., Anderston	... / ... / ...	Glasgow ...	... / ...	Machinery Stores, Leeds	... / ...	1487
Lees, Asa, & Co., Ltd. ...	Ship Repairers ...	... / ... / ...	... / ... / ...	Soho Ironworks ...	... / ... / ...	Oldham ...	... / ...	Lees, Glasgow	... / ...	3088
Lester & Perkins ...	Engineers and Boilermakers	... / ... / ...	... / ... / ...	11 London Street and Royal Albert Docks	... / ... / ...	London, E. ...	... / ...	Outwork, London	... / ...	7
Lewis, John, & Sons ...	(See Burnet, Lindsay, & Co.)	... / ... / ...	... / ... / ...	Palmerston Road	... / ... / ...	Aberdeen ...	... / ...	...	... / ...	539 Albert Dk
Lindsay Burnet & Co. ...	Cycle Manufacturers ...	... / ... / ...	... / ... / ...	Holland Street, Hyson Green	... / ... / ...	Nottingham ...	... / ...	Thorough, Nottingham	... / ...	5107 Eastern
Livesey, Henry, Ltd. ...	Makers of Looms, Winding, Warping and Sizing Machines	... / ... / ...	... / ... / ...	Greenbank Ironworks ...	... / ... / ...	Blackburn ...	... / ...	Livesey, Blackburn	... / ...	642
										1534
										215

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	
				TELEPHONE NO.	TELEGRAPHIC ADDRESS.
Lloyd Hargreaves	... (See <i>Hargreaves, Lloyd</i> .)				
Lobnitz & Co., Ltd.	... Marine Engineers, Ship and Dredger Builders	... Engine Works—53 Anderson Quay Boiler Works—172 Lancefield St.	... Glasgow	... Renfrew	... Lobnitz, Renfrew ... 4
London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., The	... Marine Engineers, Shipbuilders, Boilmakers and Brassfounders	... Middleton Shipyards, Govan	... Glasgow	... Middleton, Glasgow	... 665
London Graving Dock Co., Ltd.	... Ship and Engine Repairers ...	... 114 Fenchurch Street and London, E.C. West India Dock	... London	... Augmented, London	... 12101 Avenue
Loudon Brothers	... Engineers' Machine Tool Makers ...	Clyde Engineering Works, Johnstone Office—46 Waterloo Street, Glasgow	... Johnstone	... Loudon Brothers, Johnstone	... 26
Low, James F., & Co.	... Machine Makers, Iron and Brass Founders	... Monifieth Foundry, Monifieth	... Achilles, Glasgow	... Achilles, Glasgow ... 553	... ... 1 Monifieth
Luke & Spencer, Ltd.	... Manufacturers of Grinding and Polishing Machinery, Emery Whetts, etc.	... Near Broadheath	... Near Manchester	... Emery, Broadheath	... 49 Altrincham
Lytham Shipbuilding Co.	... Shipbuilders and Engineers ...	... Lytham	... Lytham	... Sternwheel, Lytham	... 59
M'Dowall, John, & Sons	... Saw Mill and General Engineers	... Walkinshaw Street	... Johnstone	... Johnstone	... Macdowall, Johnstone
M'Gee, Walter, & Son	... Engineers and Machinists	... Albion Works	... Paisley	... Paisley	... Albion, Paisley ... 137
Macgregor Cycle and Engineering Co., Ltd.	... Cycle Manufacturers ...	... Aspley Lane	... Nottingham	... Nottingham	... Macgregor, Nottingham 845
M'Kie & Baxter	... Engineers, Shipbuilders and Boilmakers	Copland Works, Govan ... Glasgow	... Glasgow	... Calidad, Glasgow ... 1891	.........

M'Laren, J. & H. ...	makers General Engineers and Makers of Traction Engines	works Midland Engine Works ...	Leeds	... M'Laren, Leeds ...	642
McNaught, John & William.	Engineers, Millwrights and Machinists	St. George's Foundry, Crawford Street Colonial Ironworks, Helen Street, Govan	Rochdale	... McNaught, Rochdale Colonial, Glasgow ...	141 1562
M'Neil, John, & Co. (formerly Aitken, M'Neil & Co.)	Engineers, Makers of Sugar Machinery, Rice Mills, Soap and Glycerine Plants, and Oil Refining Plants	Crowther Street, Salford	Manchester	... Vortex, Manchester	2733
Madan, Charles S., & Co. ...	Makers of Cocks and Valves	Office — St. George's House, 8 Eastcheap Works — St. George's Wharf	London, E.C.	Parsonia, London	2215 Avenue
Manganese Bronze and Brass Co. Ltd.	General Founders, Engineers and Metal Rollers	Bloomsgrave Works ...	Deptford, S.E.	St. George, London	9 Deptford
Manlove, Alliott & Co., Ltd.	Engineers	Canning Works, Dews- bury Road	Nottingham	Manloves, Nottingham	274
Mann & Charlesworth	Agricultural and General Engineers	Elland Road	Leeds	... Canning, Leeds ...	1335
Mann, G., & Co. ...	Makers of Lithographic and Letter- press Printing Machines and Presses; Machines for Printing on Tin Plates	Boye Engine Works, Chapel Hill, Hunslet Brass and Iron Works, Rashcliffe	Leeds	... Mann, Leeds ...	502
Manning, Wardle & Co.	Locomotive Engine Builders	... Manufacturer of Engine and Boiler Mountings and Fittings, and Valves and Fittings for Water- works purposes	Huddersfield	... Manning, Leeds ...	514
Marchant, G. M. ...	Brassfounder	... Engineer, Brassfounder and Copper- smith	London, S.E.	G. Marchant, Huddersfield	210
Marner, G. W. ...	... ... ... ... ...	193 Bermondsey Street ...	...............	...............	...
Marsden, Ellis ...	... ... ... ...	15 Argyle Street ...	... ... ... ...	... ... ... ...	828
Marsden, John, & Son	... ... ... ... ...	188 Regent Road Bridge Street	... ... ... ...	... ... ... ...	2641 Bootle 127

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Marsden, Samuel, & Son, Ltd.	Bolt and Nut Manufacturers and Makers of Machines for making and finishing the same; also Oil Fuel Furnaces for heating Iron or Steel.	London Road ...	... Manchester ...	Bolts, Manchester ...	336 and 606
Marshall, Fleming & Jack ...	Engineers and Cranemakers	Dellburn Works ...	... Motherwell ...	Dellburn, Motherwell	
Marshall, Sons & Co., Ltd. ...	General Engineers ...	Britannia Works and Trent Works ...	Gainsborough ...	Marshall, Gainsborough	10
Mason, John ...	Textile Machinist ...	Globe Works ...	Rochdale ...	Masons, Rochdale	48
Masson, Scott & Co., Ltd. ...	Engineers and Millwrights ...	York Place, New Wards-worth	London, S. W.	Massioun, London ...	28 Battersea
Mather, Alex., & Son ...	Engineers and Founders ...	Orwell Works, Dalry Road	Edinburgh ...	Mather, Edinburgh	62 West
Matthews, William, & Co. ...	Artesian Well Engineers and Pump Makers	Brookside Works, Queen's Road, Miles Platting	Manchester ...	Matthews, Harpurhey	
Maud & Turner ...	Engineers and Machine Tool Makers	Perseverance Works, Gibbet Street	Halifax ...	Maud Turner, Halifax	67
Maudslay, Sons & Field, Ltd.	Marine and General Engineers and Boilermakers	110 Westminster Bridge Road	London, S. E.	Maudslays, London	681 Hop.
Mavor & Coulson, Ltd. ...	Engineers and Electricians and Dynamo Makers	47 King St., Mile-End ...	Glasgow ...	Prodigious, Glasgow	1369
Mayes, John ...	Brassfounder, Wheel Cutter, Machinist, and Model Maker	Red Lion St., Clerkenwell	London		
Meadowcroft, C. H., & Brother	Brassfounders and Finishers	Church Street ...	Dukinfield ...	Meadowcroft Brothers	213 Ashton
Mechan & Sons ...	Engineers ...	Scotsoun Ironworks ...	Glasgow ...	Dukinfield, Glasgow ...	871
Meldrum Brothers ...	Engineers ...	Atlantic Works, City Rd., and Branches	Manchester ...	Meldrum, Manchester	2437
Mellor, Moses, & Sons, Ltd. ...	Hosiery Machinists ...			Meldrum, London	1674
				Meldrum, Leeds	5964 Avenue.
				Cronul, Newcastle-on-Tyne	1391
				Meldrum, Paris	1461
				Mellor, Nottingham	113
				Lee Works, Arkwright Street	

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWNS.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Morton & Edwards ...	Brassfounders ...	... Hollins Street Works	Stalybridge		
Morton, S. & H., & Co. ...	Engineers, Boilermakers and Iron Shipbuilders	Victoria Dock	Leith ...	Morton, Leith ...	4047
Mudd, W. R., & Co. ...	Engineers and Machinists ...	Beatrice Road	Leicester	Mudd, Leicester ...	349
Mui. & Houston, Ltd. ...	Marine Engineers and Boilermakers	33 Portman Street	Glasgow	Beatitude, Glasgow	1553
Muir, William, & Co., Ltd. ...	Machine Tool Makers	Sherbourne Street	Manchester	Britannia, Manchester	529
Murdoch & Murray ...	Shipbuilders ...	... ...	Port-Glasgow	Murdoch Murray, Port-Glasgow	32
Musgrave Brothers ...	Hydraulic and General Engineers ...	Crown Point Foundry, East Street	Leeds	Musgrave, East Street	1226
Musgrave, John, & Son, Ltd.	Engineers, Boilermakers and Millwrights	Globe Ironworks, Kay Street	Bolton	Musgrave, Bolton ...	67
Napier Brothers, Ltd. ...	Engineers ...	100 Hydepark Street	Glasgow	Windlass, Glasgow	714
Napier, R., & Sons, Ltd. ...	Marine Engineers, Shipbuilders, Engine, Boiler and Ship Repairs	Engine and Boiler Works — Lancefield Street	Glasgow	Napier, Glasgow ...	3363
Nasmyth, Wilson & Co., Ltd.	Locomotive, Hydraulic and General Engineers, Gas Engine Makers ...	Shipyard—Govan Bridgewater Foundry, Patricroft Wellington Road...	Near ... Manchester Ashton-under-Lyne	Nasmyth, Patricroft National, Ashton-under-Lyne	1603
National Gas Engine Co., The, Ltd.					5 Eccles
Needham Brothers & Brown	Engineers, Iron and Brass Founders	Borough Foundry, Pontefract Road	Barnsley	... ... ...	43
New Found Cycle Components Co.	Cycle Fittings Manufacturers	Beatrice Road	Leicester	Component, Leicester	349

Newton's Electrical Works, Ltd.	Manufacturing Electrical Engineers	Road, Herbert Street ...	... Taunton ... Arc, Taunton ...	9 Nat.
Moble & Lund ...	Tool Makers ...	Northern Machine Tool Works, Phillip Street, Victoria Dock Road	Felling-on-Tyne London, E. ...	11023
Normandy's Patent Marine Aerated Fresh Water Co., Ltd.	Engineers and Ironfounders ...	Northumberland Engine Works, Northumberland Forge South Dock ...	Wallsend-on-Tyne Sunderland ...	1578
North-Eastern Marine Engineering Co., Ltd.	Marine Engine Builders, Boiler-makers Iron and Brass Founders Makers of Heavy Iron and Steel Forgings, etc.	Northumberland Engine Works, Northumberland Forge South Dock ...	Wallsend-on-Tyne Sunderland ...	104 P.O. 105 P.O. 10 Nat. 37 Nat. 10 P.O. 12 P.O. 130 Nat.
Nottingham Engineering Co., Ltd.	Marine Engine Builders, Boiler-makers, Iron and Brass Founders, and Makers of Heavy Iron and Steel Forgings Engineers, Millwrights and Tool Makers	Marine Engine Builders, Boiler-makers Iron and Brass Founders Makers of Heavy Iron and Steel Forgings Engineers, Millwrights and Tool Makers	Canterbury Rd., Radford Nottingham ...	Iron, Nottingham
Oldham, Alexander, & Sons Oldham Boiler Works Co., Ltd.	Engineers, Machinists and Piston Makers	Johnson Brook Works, Oldham Edge Iron Works	Piston Oldham ...	8 Hyde
Oldham & Son ...	Boilermakers ...	... ...	Dukinfield ...	16
Oldroyd, Edwin, & Co., Ltd.	Engineers and Piston Makers	Steel Coil Piston Works, Denton Crown Works ...	Near Manchester ...	235
Orient Steam Navigation Co., The	Heating, Ventilating, Hydraulic, Mechanical and Electrical Engineers	... ... ...	Leeds ...	241
		13 Fenchurch Avenue ...	London, E.C. ...	Orient, London

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Osborn, Samuel, & Co. ...	Steel Manufacturers ...	... Clyde Steel and Iron Works, Vulcan Ironworks	Sheffield	Osborn, Sheffield ...	409 and 2039
Owen, Brazil & Holborow ...	Steam Engine and Pump Makers	... Vulcan Ironworks	Bristol	Hydraulic, Bristol ...	846
Oxley Brothers, Ltd. ...	Ironfounders and Engineers...	... Mowbray Street ...	Sheffield	... ... ...	1087
Oxley, George, & Sons ...	Ironfounders and Engineers	... Vulcan Foundry, Attercliffe Road	Sheffield	... ... ...	1200
 Palmer's Shipbuilding and Iron Co., Ltd.	Shipbuilders and Engineers ...	... ... ...	Jarrow-on-Tyne	Palmers, Jarrow ...	148 P.O.
Parker, Charles, Sons & Co. ...	Engineers, Machine Makers and Ironfounders	... Victoria Foundry	Dundee	Parker, Dundee ...	149 P.O.
Parker, Thomas, Ltd. ...	Electrical Engineers ...	... Wednesday Road	Wolverhampt'n	Coils, Wolverhampton ...	2765 Nat.
Parkinson, J. ...	Machine Tool Maker	... Canal Ironworks	Shipley	Temples, Shipley ...	34
Parsons, C. A., & Co. ...	Electrical Engineers, Electric Lighting Plant, Electric Motors and Steam Turbine Makers	Heaton Works ...	Newcastle-on-Tyne	Turbo, Newcastle-on-Tyne ...	40 and 80
Payne & Sons ...	Printers' Engineers ...	... Atlas Works	Otley ...	Wharfedale, Otley ...	1618 Nat.
Pearn, Frank, & Co., Ltd. ...	Hydraulic Engineers and Steam Pump Makers	Thomas Street, Gorton	Manchester ...	Pumps, Manchester ...	1021
Pearson & Bennion, Ltd. ...	Engineers and Machinists ...	Union Works, Belgrave Road	Leicester	Prominent, Leicester ...	103
Pease, Rhodes & Co., Ltd. ...	Engineers, Brassfounders and Coppersmiths	Offices, Showrooms, and Brass Works—19 Little Horton Lane	Bradford	Stanchion, Bradford ...	123
		Iron Works—Thornton Road		Heleb's Yard	398A

Pegg, Samuel, & Son	Engineers and Ironfounders	... Alexander Street...	Leicester	... Pegg, Ironfounder ...	104
Pemberton & Co.	Loom Makers	... Waterloo Iron Works, Trafalgar Street	Burnley	... Pembertons, Machinists	113
Penn, John, & Son, Ltd.	Engineers	... Greenwich	London, S.E.	... Shafting, Leeds	231
Perkin & Co., Ltd. ...	Engineers	... Junction Engine Works, Whitehall Road	Leeds	... Petrie, Jun., Rochdale	37A
Petrie, John, Jun., Ltd.	Wool Washing and Drying Machines, General Repair Work, Ironfounders, etc.	... River Street Ironworks	Rochdale	... Dynamo, Bradford...	952
Phoenix Dynamo Manufacturing Co.	Electrical Engineers	... Hubert Street, Leeds	Bradford	... Phosphor Bronze, London	4557 Hop.
Phosphor Bronze Co., Ltd.	Brassfounders, Makers of Metallic Alloys & Metal Rollers and Drawers	87 Summer Street	London, S.E.	... Pickering's, Stockton-on-Tees	4544 Nat.
Pickering's, Ltd.	... Lift, Crane and Elevator Builders, Hydraulic and General Engineers	Globe Elevator Works	Stockton-on-Tees	... Darwen	
Pickup & Kelly ...	Ironfounders, Engineers and Paper Stainers' Machinists	Atlas Road Foundry	... Colne	... Pillingsons, Colne	
Pilling, John, & Sons, Ltd.	Loom Makers, Iron & Brass Founders	Primet Foundry ...	... Oldham	... Platts, Oldham	26
Platt Brothers & Co., Ltd. ...	Makers of Textile Machinery	Hartford Works ...	Leeds	... ... ...	501
Pool, L., & Son	Bolt, Nut and Screw Manufacturers	Lion Screw & Bolt Works, Sweet Street	London, E.C.	Irradiating, London	299 Avenue
Pope, W., & Son, Ltd.	Gas and General Engineers	Broad Street House	... Slough	Gotha, Slough	7 Slough
Potter, W. H., & Sons	Shipbuilders and Engineers	Gotha Works	... Liverpool	... Seahorse, Liverpool	1102
Pratt, F., & Co., Ltd.	Machine Tool Makers	Queen's Dock	... Halifax	... Pratt, Halifax	161
Prince Smith & Son ...	(See <i>Smith, Prince, & Son</i>)	Eagle Ironworks, Victoria Street, East	... Moses Gate Machine Works	Near Bolton	Spindles, Bolton
Proctor, Jonas ...	... Roller, Ring, Spindle, Spindle and Flyer and Tool Maker	Elland Road	... Leeds	... Cambrian, Leeds	421
Pullan & Mann ...	Brick, Tile and Sanitary Pipe Machinery Engineers, etc.	... Pipe	... ...	... ...	1232

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Richmond, Joseph, & Co., Ltd.	Engineers ...	30 Kirby Street, Hatton Garden	London, E.C.	Richmond, London	822 Holborn
Frey, J. F. ...	Engineer, Millwright and Machine Maker	Marino Mills, Moldgreen	Huddersfield	...	284
Frey, J. H., & Co. ...	Engineers, Bleaching, Dyeing and Finishing Plant Makers	Elton Ironworks ...	Bury ...	Riley, Bury ...	59
Fischie, Hart & Co., Ltd.	Engineers, Iron and Brass Founders	Mountpottinger Road ...	Belfast	Ritchie Hart, Belfast	145
Peterson, A. W., & Co.	Engineers, Shipbuilders and Ship Repairers	Royal Albert Dry Dock, Albert Docks	London, E.	Trunnon, London	538 Albert Dock
Peterson & Orchard, Ltd.	Engineers, Millwrights, Machine Makers and Founders	Wallace Foundry ...	Dundee	Founders, Dundee	398
Brown Hood Cycle Co., Ltd	Cycle Manufacturers ...	Newdigate Street ...	Nottingham	Enterprise, Nottingham	126
Johnson & Dodd ...	Engineers ...	Bridge Road Works, Garfurd Street, Poplar	London, E. ...	Ferrarius, London ...	5063 Eastern
Johnson, J. H. ...	Brassfounder ...	91 Globe Road ...	London, E.	...	
Johnson, Joseph, & Co.	Engineers, Ironfounders and Machinists ...	Springfield Ironworks, Salford ...	Manchester ...	Opal, Manchester ...	783
Johnson, William, & Son ...	Machinists ...	High Lee Mill ...	Oldham	Machinery, Oldham	198
Rodger, A., & Co. ...	Shipbuilders and Ship Repairers ...	Dock Shipbuilding Yard	Port-Glasgow	Rodger, Port-Glasgow	7
Bolton & Son ...	(See <i>Bolton, Rodger, & Son.</i>)				
Rodger, R., & Co. ...	Engineers, Iron and Brass Founders, Coppersmiths, Makers of Steam Winches, Cranes, etc.	Stockton Iron Foundry, West Row	Stockton-on-Tees	Roger, Stockton-on-Tees	19 P.O.
Persson, John, & Co., Ltd. ...	Steel Founders, Forgemasters and Engineers	Stanners Closes Steel Works	Wolsingham, R.S.O. (Co. Durham)	Steelworks, Wolsingham	456 Nat.
Downs & Thompson, Ltd. ...	Engineers and Boilermakers	Old Foundry ...	Hull ...	Rose, Hull ...	58 Nat.
Faling & Appleby ...	Electrical Engineers ...				344
Bradford ...	Trafalgar Street ...				844

Rowan, David, & Son	Marine Engineers and Boilermakers	231 Elliot Street ...	Glasgow	... Rowan, Glasgow ...	1316
Royce, F. H., & Co., Ltd.	Manufacturing Electricians ...	Cooke Street, Huime ...	Manchester	Switch, Manchester	772 and 3562
Russell & Co. ...	Shipbuilders and Steel Spar Makers	Kingston Shipbuilding Yard	Port-Glasgow	Russell, Port-Glasgow	3335 Glasgow II Port-Glasgow 4
Russell, George, & Co.	Engineers and Cranemakers	Alpha Works ...	Motherwell ...	Russell, Motherwell	
Russell, S., & Sons ...	Ironfounders ...	Bath Foundry, Bath Lane	Leicester	... ... ...	115
Ryder, Thomas, & Son	Forging Machines, Engineers' Tool Makers, Roller Makers for Cotton Machinery, etc.	Turner Bridge Ironworks, Tonge.	Bolton	Ryder, Machinists, Tonge, Bolton	206
Ryder, T., & Co.	Brewers' Engineers, Coppersmiths, etc.	Knott Mill ...	Manchester	Lecomber, Manchester	1789
Ryder, William	Machinist, Tool Maker, Roller Spindle and Flyer Maker, Ring and Spindle Maker for Cotton Machinery	Bee Hive Works, Folds Road	Bolton	Beehive, Bolton ...	55
St. George's Ironworks, Ltd.	Engineers, Ironfounders, Millwrights, Wheel and Pulley Makers	Hulme Hall Road	... Manchester	Ormerod, Grierson, Manchester	229
St. Pancras Ironworks Co., Ltd.	Engineers, Ironfounders and Contractors	171, 173 St. Pancras Road	London, N.W.	Equitation, London	519 King's Cross
Sagar, J., & Co.	Wood Working Machinery Manufacturers, Saw Mill Machinery Makers	Canal Works ...	Halifax	Sawtooth, Halifax ...	136
Sawyer, W., & Son ...	Brassfounders ...	51 to 53 Mount Pleasant, Clerkenwell	London, E.C.		
Saxon, George ...	Engineer and Millwright ...	Openshaw Engineering Works	Manchester	Saxons, Openshaw ...	959
Schofield & Taylor	Engineers and Millwrights ...	Perseverance Ironworks, Turnbridge	Huddersfield	... ... ...	120
Scholefield, R. ...	Brick Machine Maker ...	Kirkstall Road ...	Leeds	Brick, Leeds	
Scott Brothers ...	Machine Tool Makers ...	West Mount Ironworks ...	Halifax	Scott, Halifax ...	116

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Scott & Co. ...	Shipbuilders and Engineers ...	Cartsdyke ...	Greenock ...	Scott, Greenock ...	113
Scott, Ernest, & Mountain, Ltd. ...	Electrical and General Engineers, Iron and Brass Founders	Close Works ...	Newcastle-on-Tyne ...	Esco, Newcastle-on-Tyne	432 P.O. 1259 Nat.
Scott & Hodgson ...	Engineers ...	Guide Bridge Ironworks, Guide Bridge Abden Works ...	Near Manchester ...	Engines, Hooley Hill	67
Scott, John, & Co. ...	Engineers and Shipbuilders ...	Leeds Old Foundry, Marsh Lane	Kinghorn ...	Scott, Kinghorn	855
Striven & Co. ...	Machine Tool Makers ...	Overy Street Ironworks	Leeds ...	Scriven, Leeds	1819
Seager, L. J. & C. ...	Engineers, Iron and Brass Founders	Dens Ironworks ...	Dartford ...	Seager, Engineer, Dartford	
Shanks, Alexander, & Son, Ltd. ...	Engineers ...	Bush Lane House, Bush Lane, Cannon Street	Arbroath, N.B. Shanks, Arbroath		
Shanks, Thomas, & Co. ...	Engineers and Tool Makers ...	Union Ironworks ...	London, E.C. Shankson, London	Johnstone ...	5
Sharp, Stewart & Co., Ltd. ...	Locomotive Engine Builders and Tool Makers	Atlas Works, Springburn	Glasgow ...	Shanks, Johnstone ...	
Sharples, William, & Co. ...	Engineers, etc. ...	Irwell Foundry ...	Ramsbottom ...	Glasgow ...	3210
Saw, Mark ...	Engineer, Millwright and Ironfounder	Milsbridge Ironworks, Pollard St., Milsbridge	Huddersfield ...	Sharples, Engineers, Ramsbottom	117
"Shepherd," Hill & Co., Ltd. ...	Machine Tool Manufacturers, Brick, General Brassfounder, Statue and Ironfounders ...	Union Foundry, Hunslet Road	Leeds ...	Shepherd Hill, Leeds	1397
Shoard, W. ...	Fine Art Caster	8 Great Bath Street	London, E.C.		
Sorrock, J. & R. ...	Ironfounders ...	Lee Foundry ...	Darwen ...	Vulcan, Darwen	10
Sobe, Gorman & Co. ...	Submarine Engineers and Manufacturers of Diving Apparatus	187 Westminster Bridge Road	London, S.E.	Siebe, London	251 Hop.
Schemmens Brothers & Co., Ltd. ...	Telegraphic and Electrical Engineers and Contractors	12 Queen Anne's Gate, 15 Victoria Buildings, 26 Gringer Street, Westgate, Newcastle-on-Tyne	London, S.W.	Siemens, London	3099 West-minster.
				Siemens, Newcastle-on-Tyne	1715

Simpson, James, & Co., Ltd.	Builders Hydraulic and General Engineers, and Makers of Pumps Manufacturers of Cycles and the Simpson Lever Chain	101 Grosvenor Road, Pimlico ... Draycott ...	London, S.W. ... Derbyshire ...	Aquosity, London, S.W. ... Chain, Draycott, Derby	316 West- minster. 1629
Sinclair, George	Boilermaker and Engineer ...	Albion Boilerworks ...	Leith ...	Sinclair, Lith ...	537
Smith, A. & D., & Co.	Marine Engineers, Millwrights, Shipsmiths and Ship Repairers Boilermakers	Pier Engine Works, Thames Place, Lime- house Hole, ... Park	London, E. ...	Smiths, Limehouse Pier	1629
Smith & Coventry, Ltd.	Engineers, Patentees and Manufac- turers of Labour-Saving Machine Tools	Gresley Ironworks, Ordsal Lane, Salford	Manchester	Gresley, Manchester	564
Smith, Daniel, & Co. ...	Presses, Stamps, Shears and Metal Working Machinery (See <i>Ford-Smith, F.</i>)	Castle Ironworks, Raglan Street	W'iverhampt'n	Presses, Wolver- hampton	7210
Smith, F. Ford-	Engineers' Tool Maker ...	Paragon Ironworks, South Parade	Halifax	Radial, Halifax	
Smith, G. F. ...	Machine Tools for Shipbuilders and Boilermakers	Possil Engine Works, Possilpark	Glasgow	Possil, Glasgow	3666
Smith, Hugh, & Co. ...	Engineer and Millwright, Maker of Stone Sawing Machinery, Cranes, etc. Worsted Machinery Makers	Crane Works ... Burlington Shed ...	Keighley	Prince, Keighley	4
Smith, John ...	Engineer and Cranemaker ...	Rodley ...	Leeds	Smith, Rodley	18 Stanningley
Smith, Prince, & Son ...	Loom Makers ...	Sun Ironworks ... Royal Exchange ... (Tuesday and Friday. New Southgate ...	Heywood ... Manchester ... O. & P. Pillars)	Smiths, Heywood ... Near London	1102 Nat.
Smith, Thomas ...	Crane, Machine Tool and Ordnance Machinery Makers	Chamber Ironworks, Hollinwood ... Atlas Works, Pitt Street	Manchester ... Keighley	Centrifugal, New Southgate	
Southgate Engineering Co., Ltd., The	Machine Tool, Crane and Weigh- ing Machine Makers	Machine Tool Makers ...	Spencer, Engineer, Keighley	A.B.C. Engineering Code used	207
Spencer, James, & Co.	Machine Tool Makers ...	Machine Tool Makers ...	Spencer, Engineer, Keighley	Spencer, Hollinwood, Manchester	118
Spencer, John, & Co.,	Machine Tool Makers ...	Machine Tool Makers ...	Spencer, Engineer, Keighley		

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Spencer, John, & Sons, Ltd.	Steel Manufacturers ...	... Cuseburn Forge ...	Newcastle-on-Tyne	Tyne, Newcastle-on-Tyne	1212 Nat. 464 P.O.
Spetch & Thomas ...	Gas Engineers ...	... Newburn Steel Works ...	Newburn		
		... West-End Mills, Long-side Lane	Bradford		
Springfield Cycle Co., Ltd. ...	Cycle Manufacturers ...	... Sandiacre ...	Nottingham	Valkyrie, Sandiacre ...	1631
Standard Engineering Co., The	Engineers, Boot and Shoe Machinists	43 Welford Road	Leicester	Standard Engineers, Leicester	502
Standard Tool Co., The	Machine Tool Makers and Iron-founders	Mearclough	Sowerby Bridge		
Stead Brothers ...	Engineers, Millwrights, etc.	... Hare Street, Gibbet Lane	Halifax	Stead Brothers, Halifax	305
Stell, Stephen ...	Tool Maker ...	... Alkincoate Works...	Keighley	Stell, Alkincoate, Keighley	
Stephen Cotton & Co. ...	(See Cotton, Stephen, & Co.)				
Stephens, Smith & Co., Ltd.	Engineers and Electricians ...	Cuba Street, Millwall	London, E.	Reckenzaun, London	
Stephenson, R., & Co., Ltd.	Locomotive and Marine Engineers, and Iron Founders	South Street	Newcastle-on-Tyne	Rocket, Newcastle-on-Tyne	458 P.O.
Stevenson & Co., ...	Engineers and Boilermakers	... Canal Foundry, Fylde Road	Preston	Propeller, or Stevenson, Preston	1153 Nat. 57
Stewart, John, & Son, Ltd.	Engineers, Shipbuilders, Dry Dock Proprietors	22 Billiter Street ...	London, E.C.	Steamships, London	4428 Avenue
Stirk, John, & Sons ...	Tool Makers ...	... Ovenden Road	Halifax	Stirk, Halifax	124
Stone, J., & Co. ...	Electrical Engineers, Bronze, Brass and Iron Founders, Manufacturers of Fire Appliances, Valves and Fittings for Water Supply, Boiler Fittings, Copper Nail, Rivet, Bolt and Nut Makers ...	Deptford...	London, S.E.	Stone, Deptford, London	2 Deptford
Storey, Isaac, & Sons ...	Brassfounders, Coppersmiths and Engineers				Little Peter Street and Manchester ...
					Stork, Manchester ...
					Empress Street, Cornbrook

Stoerth & Pitt, Ltd. ...	Engineers ...	... ...	... ...	... ...	... ...	... ...	... ...	Bath ...	... ...	Stoerth, Bath ...	... ...	39
Strang, Joseph, Ltd. ...	Ironfounders, Engineers, Calico Printers' and Bleachers' Machinists	... ...	... ...	... ...	... ...	... ...	... ...	Ramsbottom	... ...	Strang, Ramsbottom	... ...	109
Stubbs, Joseph ...	Machine Maker and Ironfounder ...	... ...	... ...	... ...	... ...	... ...	... ...	Manchester	... ...	Winding, Manchester	... ...	440
Sudworth & Settle, Ltd. ...	Cycle Manufacturers and Cycle Fittings	... ...	... ...	... ...	... ...	... ...	... ...	BranchWorks—Ancoats Mill Street Works, Ancoats Spinner Cycle Works	... ...	Fittings, Nottingham	... ...	5129
Summers & Scott ...	Engineers ...	... ...	... ...	... ...	... ...	... ...	... ...	Nottingham	... ...	Summers, Gloucester	... ...	816
Sunderland Forge and Engineering Co., Ltd., The ...	Electrical and General Engineers	... ...	... ...	... ...	... ...	... ...	... ...	High Orchard Ironworks	... ...	Sunderland ...	... ...	54
Swan, C. S., & Hunter, Ltd. ...	Shipbuilders, Floating Graving Dock Builders and Ship Repairers	... ...	... ...	... ...	... ...	... ...	... ...	Wallsend	... ...	Newcastle-on-Tyne	... ...	268 Nat.
Swift, George ...	Machine Tool Maker ...	... ...	... ...	... ...	... ...	... ...	... ...	Claremont Ironworks	... ...	Halifax	... ...	411 P.O.
Sykes, Alfred ...	Electrical and Mechanical Engineer	... ...	... ...	... ...	... ...	... ...	... ...	Spring Place Mill, Springwood Street	... ...	Swift Claremont, Halifax	... ...	2 Nat.
Sykes, John, & Sons, Ltd. ...	Machinists ...	... ...	... ...	... ...	... ...	... ...	... ...	Turnbridge Machine Works	... ...	Huddersfield	... ...	Wallsend
Tate, James ...	Engineer ...	... ...	... ...	... ...	... ...	... ...	... ...	Harris Street	... ...	... Bradford	... ...	1402
Tatham, William, & Co. ...	Cotton Waste, Wadding, etc., Machinery Makers	... ...	... ...	... ...	... ...	... ...	... ...	Vulcan Works	... ...	Rochdale	... ...	Tatham Company, Rochdale
Taylor & Hubbard ...	Engineers and Cranemakers	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	Leicester	... ...	Lifting, Leicester
Taylor, Lang & Co., Ltd. ...	Textile Machinists ...	... ...	... ...	... ...	... ...	... ...	... ...	Castle Ironworks	... ...	Stalybridge	... ...	575
Taylor, Robert, & Sons ...	Steam Boilers and Boiler Fittings	... ...	... ...	... ...	... ...	... ...	... ...	Marsden Ironworks	... ...	Huddersfield	... ...	107
Taylor, Thomas ...	Engineer and Machinist	... ...	... ...	... ...	... ...	... ...	... ...	Gladstone Street	... ...	Leicester	... ...	3 Marsden
Taylor, Wordsworth & Co. ...	Machinists ...	... ...	... ...	... ...	... ...	... ...	... ...	167 Water Lane	... ...	Leeds	... ...	86
												540
												Wordsworth, Leeds

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.		TELEPHONE No.
				TELEPHONE	TELEGRAPHIC ADDRESS.	
Thompson, J. W. ...	Ironfounder ...	Bridge Foundry ...	Sunderland ...	Thompson Foundry, Sunderland	154 Nat.	
Thomson, Son & Co. ...	Engineers, Millwrights, Machine Makers and Founders ...	Douglas Foundry ...	Dundee ...	Turbine, Dundee	402	
Thornycroft, John I., & Co. ...	Marine and General Engineers, Shipbuilders and Boilmakers ...	Church Wharf, Chiswick	London, W...	Thornycroft, London	6 Hammer-smith	
Thornton & Crebbin ...	Ironfounders and Engineers ...	Hannerton Street ...	Bradford ...	Ironfounders, Bradford	226	
Thwaites Brothers, Ltd, ...	Engineers ...	Vulcan Iron Works, Thornton Road	Bradford ...	Bradford, Bradford	325	
Tinker, Shenton & Co., Ltd. ...	Boilmakers ...	Hyde Boiler Works ...	Hyde, Cheshire	Thwaites, Bradford	21	
Tomlinson, G. W. ...	Machinist ...	Engine Bridge Works ...	Huddersfield	Duplex, Hyde	70	
Tomlinson, James (Rochdale) Ltd. ...	Machinery Manufacturers ...	Soho Ironworks, Oldham	Rochdale ...	Tomlinson, Huddersfield	54	
Tonkinson, H., & Sons ...	Ironfounders, Plumbers and Smiths ...	Boro' Road Foundry, Borough Road	Sunderland ...	Tomlinson, Huddersfield	127 Nat.	
Trent Cycle Co., Ltd, The ...	Cycle Manufacturers ...	Long Eaton ...	Nottingham ...	Cycle, Long Eaton	1624	
Turnbull, Alexander, & Co. ...	Valve and Steam Trap Makers ...	St. Mungo Works, Bishop-briggs, George Street, Grove	Glasgow ...	Valve, Bishopbriggs	4394	
Turner & Co. ...	Engineers ...	Savile Street ...	London, N.W.	Tension, London		
Turton, George, Platts & Co. ...	Engineers' Manufacturers ...	...	Sheffield ...	Buffet, Sheffield	1370	
Umpherston & Co., Ltd. ...	Engineers and Millwrights ...	...	...	...	...	Umpherston, Leith
Unbreakable Pulley and Mill-gearing Co., Ltd., The ...	Engineers and Millwrights ...	...	...	Strength, Manchester	52 Nat.	
Urmon & Thompson ...	Engineers and Millwrights ...	...	...	Horsepower, London, E.C.	5051 Bank	

Engineers, Ship Ventilator and
Pivoted Sidelight Manufacturers

Utley, Thomas, & Co.

Vaughan & Son	...	Overhead Electric Travelling Crane-makers	Royal Iron Works, West Gorton	Manchester ...	Vaunting, Manchester	5106
Vauxhall Ironworks Ltd., The	Co.,	Marine Engineers and Steam Pump Makers	Wandsworth Road ... City Office — 45 Leadenhall Street	London, S.W. ... London, E.C. ...	Wellhole, London	274 Hop 800 Avenue
Vickers, Sons & Maxim, Ltd.	Steel Manufacturers, Gun Makers, etc.	Steel Manufacturers, Gun Makers, etc.	River Don Works, Bright-side	Sheffield ...	Vickers, Sheffield ...	308, 1845, Nat. 5 P.O.
Shipbuilders and Marine Engineers	...	Shipbuilders and Marine Engineers	Naval Construction Works	Barrow-in-Furness	Vickers, Barrow-in-Furness	14 Nat. 1 P.O.
Makers of Ordnance	...	Makers of Ordnance	28 and 32 Victoria Street	London, S.W.	Vickers, London ...	3214 West-minster
Gun Makers, etc.	...	Gun Makers, etc.	Erith Ordnance Works ...	Erith ...	Maxim, Erith ...	
(See Coates, Victor, & Co., Ltd.)	...	(See Coates, Victor, & Co., Ltd.)	Dartford Works ...	Dartford ...	Maxim, Dartford	
Victor Cycle Co., Ltd. (John Jardine)	...	Cycle Manufacturers ...	Harley Street, Lenton & Deering Street	Nottingham ...	Vanquisher, Nottingham	815 295
Wade, Josiah, Ltd.	...	Printing Machine Makers	Crown Works, Hopwood Lane	Halifax ...	Halifax Wade, ...	42
Wales, George, & Co.	...	Printers' Furnishers	10 College Lane ...	Liverpool ...	Impression, Liverpool	5181
Wainwright, Thomas, & Sons	...	Lathe Chuck Makers	Hope Works ...	Halifax ...	Wade, Halifax	42
Walker Brothers	...	Engineers, Millwrights, Iron and Brass Founders	258 Euston Road	London, N.W. ...	...
		Engineers, Millwrights, Brass and Iron Founders	Commercial Ironworks	Stalybridge ...	Wainwright, Stalybridge	128
		Engineers and Ironfounders, Makers of Iron and Steel Forgings	Pagefield Ironworks	Wigan ...	Pagefield, Wigan ...	14

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.		TELEPHONE No.
				TELEGRAPHIC ADDRESS.		
Walker, Eaton & Co. ...	Engineers and Ironfounders ...	Wicker Ironworks ...	Sheffield ...	... Founder, Sheffield ...	373	
Walker, James, & Son ...	Engineers and Millwrights ...	Caledonian Engine Works, Dundee Street, West Fountainbridge	Edinburgh	... Fountain, Edinburgh	86 West	
Walker Samuel ...	Engineer, Machinist and Ironfounder	Eagle Works, Radcliffe	Near Manchester	... Walker, Radcliffe		
Waller, George, & Co. ...	Engineers and Founders ...	Phoenix Ironworks ...	Stroud	... Waller, Bowbridge		
Wallis Brothers ...	Ironfounders ...	165 Queen Victoria Street ...	London, E.C.	... Weighbeam, London		
Wallsend Slipway and Engineering Co., Ltd., The	Marine Engine Builders, Ship Repairers and Dry Dock Owners	Ayres Quay ...	Sunderland ...	... ...	277 Nat.	
Walmsley, Charles, & Co., Ltd.	Engineers and Ironfounders ...	Wallsend ...	... Newcastle-on-Tyne	... Wall, Newcastle-on-Tyne	412 P.O.	
Ward & Haggas ...	Engine and Machine Tool Makers ...	Atlas Works, Elton ...	Bury ...	... Pumps, Bury	11507 Nat.	
Ward & Witham ...	Cycle Makers ...	EaLwood Tool Works ...	Keighley ...	... ...	64	
Waterston, H. J., & Co. ...	Ironfounders and Electro Galvanisers	Lees Road ...	Oldham ...	... ...	341	
Watson, Henry, & Sons ...	Engineers ...	Paley Street ...	Sunderland ...	... ...	74 Nat.	
Waygood, R., & Co., Ltd. ...	Electric, Hydraulic, Gas and Steam Engineers	High Bridge Works, Walkergate	... Newcastle-on-Tyne	Watson, Newcastle-on-Tyne	517 Nat.	
		Falmouth Road, Great Dover Street	London, S.E.	Waygood, London, ...	433 P.O.	
Wearmouth Foundry Co., Ltd., The	Ironfounders, Brassfounders, Brass-finishers and Coppersmiths	Monk Street ...	Sunderland ...	... ...	760 Hop.	
Webb, R. W., Ltd. ...	Cycle Component Manufacturers ...	Draycott ...	... Near Derby ...	... Tyre, Draycott	440 We-t.	
Weir, G. & J., Ltd. ...	Engineers ...	... Holm Foundry, Cathcart	Glasgow ...	... Giweir, Glasgow	3223	
Wells, Jonas ...	Brassfounder and Brass Finisher, Malleable Iron and Steel Founder	Greengate Works ...	Keighley ...	Jonas Wells, Keighley	7233	
West End Engine Works Co.	Paper Machine Manufacturers ...	170 Dundee Street	Edinburgh ...	West End, Edinburgh	770	

West, John	... ...	... ...	... ...	Gas Works Plant Gun Metal, Copper, and Brass Founder	157 and 159 Back Church Lane, Commercial Road Borough Foundry, Temple Town	London, E. ...	Jumpweld, London	7 Nat.
Wheatley & Taylor	... ...	... ...	... ...	Ironfounders ...	... ...	South Shields	Castings, South Shields	
Whittaker, C., & Co.	... ...	... ...	... ...	Engineers and Millwrights ...	... ...	Bradford	... ...	966
Whittaker, William, & Sons	... ...	... ...	... ...	Engineers ...	... ...	Oldham	... ...	83
White, Thomas, & Sons	... ...	... ...	... ...	Engineers, Machinists and Tool Makers ...	Laigh Park Engine and Machine Works	Paisley	... White, Paisley	138
White, W. B.	... ...	... ...	... ...	Machinist, Iron and Brass Founder, Loom Maker, Spring Maker, etc.	Red Scar Spring Works	Colne...	White, Colne	13
Whiteley's Acme Cycle Co., Ltd.	... ...	... ...	... ...	Cycle Manufacturers ...	Dock Street	Leeds...	Whiteley's Wheeleries, Leeds	925 925A
Whiteley, William, & Sons, Ltd.	... ...	... ...	... ...	Woollen Machinists ...	Showroom—Guildford Street	Huddersfield	Whiteley, Lockwood	98
Whitley Partners	... ...	... ...	... ...	Engineers, Iron and Brass Founders	Railway Works ...	Leeds...	Torpedo, Leeds	1144
Widdowson, J. H.	... ...	... ...	... ...	Screwing Tackle Manufacturer	Britannia Works, Ordsal Lane, Salford	Manchester ...	Taps, Salford,	
Wiggin Richardson & Co.	... ...	... ...	... ...	(See Richardson, Wiggin, & Co.)				
Wilkinson, G., & Sons	... ...	... ...	... ...	Engineers, Machine Tool Makers, Iron & Brass Founders' Machinists	Bradford Road Works	Keighley	... Wilkinsons, Engineers Keighley	
Wilkinson, P., & Sons	... ...	... ...	... ...	Brass and Gun Metal Founders	Tottenham Mews	London, W.	Rapid, London	
Wilkinson, William, & Co., Ltd.	... ...	... ...	... ...	Engineers and Ironfounders	... Holme House Foundry, Swinley Lane	Wigan		
Williams Brothers	... ...	... ...	... ...	Brassfounders, etc. ...	... Green Lane	Sheffield	... Williams, Sheffield...	
Wilson Hartnell	... ...	... ...	... ...	(See Hartnell, Wilson.)				
Winder Brothers, Ltd.	... ...	... ...	... ...	Engineers and Ironfounders	... Royds Works	Sheffield	... Winders, Sheffield ...	15
Wood & Gee	... ...	... ...	... ...	Engineers and Ironfounders...	... Barley Brook Foundry	Wigan	... Haulage, Wigan ...	55

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
					56
Woods, Hamilton, & Co Ltd.	Engineers and Ironfounders...	South Hall Street, Ordsall Lane, Salford.	Manchester	Sluice, Manchester	1962 Nat.
Wood, J. & E. ...	Iron and Brass Founders, Engineers and Millwrights; Makers of Cor- liss Engines	Victor'a Foundry, Garside Street	Bolton	Woods, Bolton	45
Woodhouse & Rixson	Bent Crank and Steel Forging Manufacturers	Chantry Steel and Crank Works, Bessemer Rd., Attercliffe	Sheffield	Rixon, Sheffield	1113
Workman, Clark & Co., Ltd.	Shipbuilders, Engineers and Boiler-makers	Spencer Basin ...	Belfast	Spencer, Belfast	56, 66, 485
Worsley Mesnes Iron Works Co.	Engineers and Ironfounders...	Worsley Mesnes Iron Works	Wigan	Engines, Wigan	46
Worth, Mackenzie & Co., Ltd.	Engineers, Iron and Brass Founders, Coppersmiths and Brass-finishers	Phoenix Works ...	Stockton-on-Tees	Worth Mackenzie	47 Nat.
Wren, Henry, & Co. ...	Engineers, Millwrights and Machine Makers	London Road Ironworks	Manchester	Wrens, Manchester	
Wright, B. & D. ...	Engineers and Millwrights ...	Oxford Works, Mean- wood Road	Leeds	Excel, Leeds	443
Yarrow & Co., Ltd. ...	Marine Engineers, Shipbuilders and Water Tube Boilermakers	Isle of Dogs, Poplar	London, E.	Yarrow, London	114 Easter
Yates & Thom ...	Engineers, Millwrights and Boiler-makers	Canal Foundry and Victoria Foundry	Blackburn	Yates, Blackburn	43 Nat.

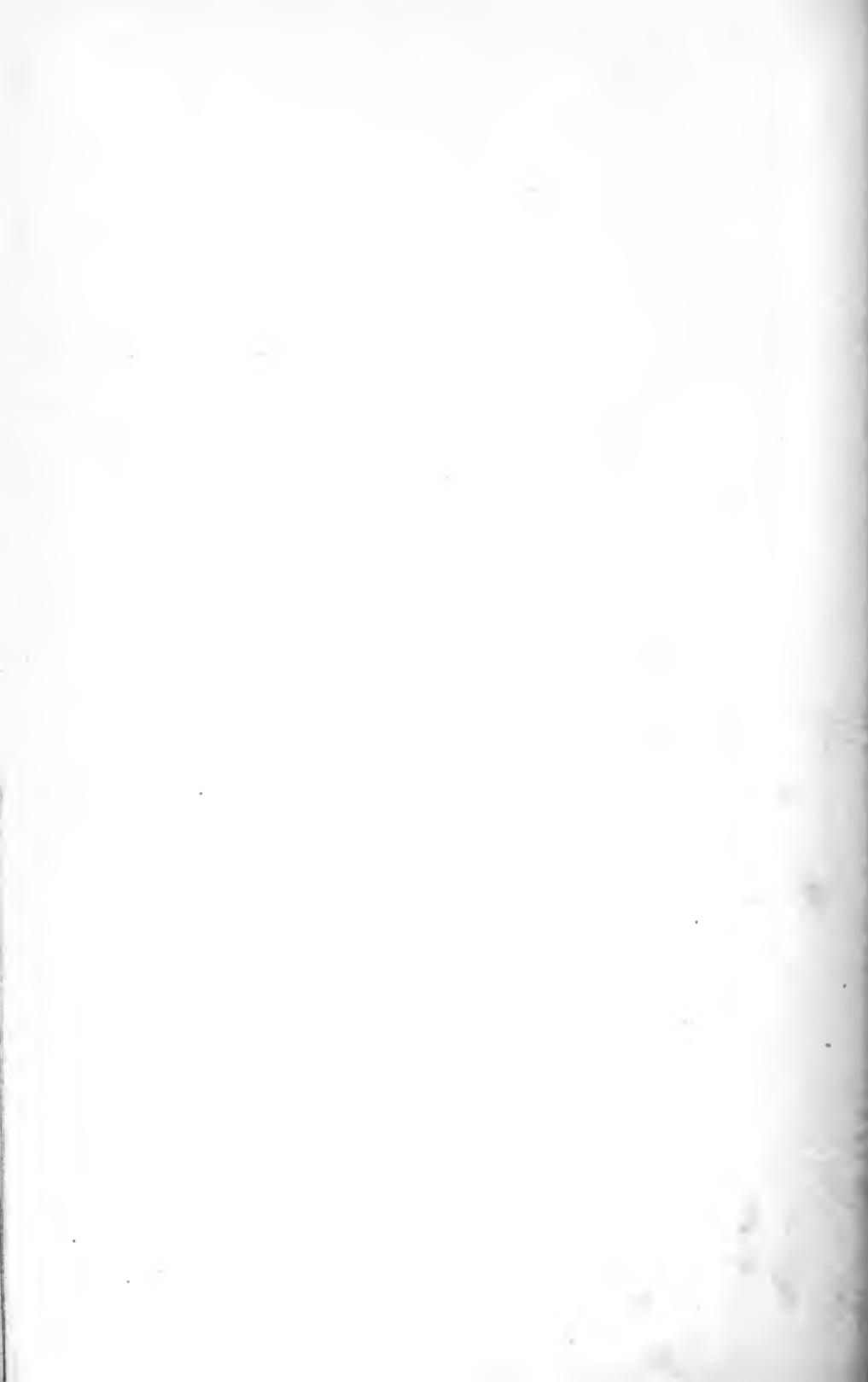
SECTION II.

ARRANGED UNDER THE RESPECTIVE TRADE HEADINGS.

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Woods, Hamilton, & Co Ltd.	Engineers and Ironfounders...	South Hall Street, Ordsall Lane, Salford.	Manchester ...	Sluice, Manchester ...	1962 Nat.
Wood, J. & E. ...	Iron and Brass Founders, Engineers and Millwrights; Makers of Cor- liss Engines	Victor'a Foundry, Garside Street	Bolton ...	Woods, Bolton ...	45
Woodhouse & Rixson	Bent Crank and Steel Forging Manufacturers	Chantry Steel and Crank Works, Bessemer Rd., Attercliffe	Sheffield ...	Rixon, Sheffield ...	1113
Workman, Clark & Co., Ltd.	Shipbuilders, Engineers and Boiler-makers	Spencer Basin ...	Belfast ...	Spencer, Belfast ...	56, 66, 485
Worsley Mesnes Iron Works Co.	Engineers and Ironfounders...	Worsley Mesnes Iron Works	Wigan ...	Engines, Wigan ...	46
Worth, Mackenzie & Co., Ltd.	Engineers, Iron and Brass Founders, Coppersmiths and Brass-finishers	Phoenix Works ...	Stockton-on-Tees ...	Worth Mackenzie ...	47 Nat.
Wren, Henry, & Co. ...	Engineers, Millwrights and Machine Makers	London Road Ironworks	Manchester ...	Wrens, Manchester	
Wright, B. & D. ...	Engineers and Millwrights ...	Oxford Works, Mean- wood Road	Leeds ...	Excel, Leeds ...	443
Yarrow & Co., Ltd. ...	Marine Engineers, Shipbuilders and Water Tube Boilermakers	Isle of Dogs, Poplar	London, E. ...	Yarrow, London ...	114 Easter
Yates & Thom ...	Engineers, Millwrights and Boiler-makers	Canal Foundry and Victoria Foundry	Blackburn ...	Yates, Blackburn ...	43 Nat.

SECTION II.

ARRANGED UNDER THE RESPECTIVE TRADE HEADINGS.



ENGINEERING EMPLOYERS FEDERATION UNDER THEIR RESPECTIVE TRADES.

Acetyline Gas Plant—

Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
Fraser & Chalmers, Ltd., London.
Holliday, Read, & Sons, Ltd., Huddersfield.
Pope, W., & Son, Ltd., London.

Agricultural Machinery and Implements—

Crowley, John, & Co., Ltd., Sheffield.
Fowler, John, & Co. (Leeds), Ltd., Leeds.
M'Laren, J. & H., Leeds.
Mann & Charlesworth, Leeds.
Marshall, Sons & Co., Ltd., Gainsborough.
Richmond & Chandler, Ltd., Manchester.

Air Compressors—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Adamson, Daniel, & Co., Dukinfield.
Arrol, Sir William, & Co., Ltd., Glasgow.
Ashton, Frost & Co., Ltd., Blackburn.
Barracough, Joseph, & Sons, Barnsley.
Beeley, Thomas, Hyde.
Bradley, R., & Co., Wakefield.
Campbell & Calderwood, Paisley.
Carrick & Wardale, Gateshead-on-Tyne.
Carruthers, J. H., & Co., Glasgow.
Clayton, Goodfellow & Co., Ltd., Blackburn.
Clayton, Howlett & Co., London.
Craig, A. F., & Co., Ltd., Paisley.
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Douglas Forge Co., Ltd., Wigan.

Air Compressors—*continued.*

Drysdale & Co., Glasgow.
Easton, Anderson & Goolden, Ltd., Erith.
Evans, Joseph, & Sons, Wolverhampton.
Fawcett, Preston & Co., Ltd., Liverpool.
Foster, Joseph, & Sons, Preston.
Fowler, John, & Co. (Leeds), Ltd., Leeds.
Fraser & Chalmers, Ltd., London.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Galloways, Ltd., Manchester.
Goodwin, Arnold, & Son, London.
Greenock Foundry Co., Greenock.
Hanna, Donald & Wilson, Paisley.
Heald, John, Chorley.
Henderson, John M., Aberdeen.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Jackson, P. R., & Co., Ltd., Manchester.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Kenworthy, Taylor & Co., Barnsley.
Kerr, Stuart & Co., Stoke-on-Trent.
Larneth, Thomas, & Co., Manchester.
Lees, Anderson & Co., Glasgow.
Manlove, Allott & Co., Ltd., Nottingham.
Mather, Alex., & Son, Edinburgh.
Meldrum Brothers, Manchester.
Milne, James, & Son, Ltd., Edinburgh.
Nasmyth, Wilson & Co., Ltd., Manchester.
Needham Brothers & Brown, Barnsley.
Pearn, Frank, & Co., Ltd., Manchester.
Pope, W., & Son., Ltd., London.
Qualter, Hall & Co., Barnsley.
Ross, R. G., & Son, Glasgow.
St. George's Ironworks, Ltd., Manchester.
Sharples, William, & Co., Ramsbottom.
Stevenson & Co., Ltd., Preston.

Air Compressors—continued.

Strang, Joseph, Ltd., Ramsbottom.
 Thwaites Brothers, Ltd., Bradford.
 Umpherston & Co., Ltd., Leith.
 Vauxhall Ironworks Co., Ltd.,
 London.
 Wailes, George, & Co., London.
 Walker Brothers, Wigan.
 West End Engine Works Co.,
 Edinburgh.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 White, Thomas, & Sons, Paisley.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Worsley Mesnes Iron Works Co.,
 Wigan.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.
 Yates & Thom, Blackburn.

Air Condensers—

(See Condensing and Cooling Plant.)

Air Propellers—

(See Fans and Blowers.)

Air Pumps—

(See Pumps and Pumping Engines;
 also Air Compressors.)

Alloys—

(See Metals—Special.)

Aluminium Founders—

Billington & Newton, Longport.
 Bowen & Co., London.
 Fletcher Brothers, Ashton-under-Lyne.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Staly-
 bridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Ranger & Hooper, London.

Ammunition Machinery—

(See Cartridge-Making Machinery;
 Explosives Machinery.)

Anchors—

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd.,
 Sheffield.
 Darlington Forge Co., Ltd., Dar-
 lington.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Rogerson, John, & Co., Ltd., Wols-
 ingham.
 Spencer, John, & Sons, Ltd., New-
 castle-on-Tyne.

Annealing Furnaces—

(See Furnaces.)

Anti-Friction Metals—

(See Metals—Special.)

Arc Lamps—

(See also Electric Light Fittings.)
 Crompton & Co., Ltd., London and
 Chelmsford.
 Fowler, John, & Co. (Leeds), Ltd.,
 Leeds.
 General Electric Co., Ltd., Manchester.
 Holliday, Read, & Sons, Ltd.,
 Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-
 Tyne.
 Jackson, P. R., & Co., Ltd., Man-
 chester.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Royce, F. H., & Co., Ltd., Man-
 chester.
 Siemens Brothers & Co., Ltd., London.

Armour Plates—

Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd.,
 Sheffield.
 Vickers, Sons & Maxim, Ltd., Shef-
 field.

Asbestos-Working Plant—

Leach & Co., Rochdale.

Ash Hoists and Ejectors—

Alley & Maclellan, Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Greenock Foundry Co., Greenock.
 Mechan & Sons, Glasgow.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Siemens Brothers & Co., Ltd., London.

Axles—

(*See also Railway Plant.*)

Allan, Edgar, & Co., Ltd., Sheffield.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Cravens, Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darlington.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Fox, Samuel, & Co., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Kirkstall Forge Co., Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Mather, Alex., & Son, Edinburgh.
 Rogerson, John, & Co., Ltd., Walsingham.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Vickers, Sons & Maxim, Ltd., Sheffield.
 Woodhouse & Rixson, Sheffield.

Baling Presses—

(*See Presses—Screw and Steam; also Hydraulic Presses.*)

Barges—

(*See Shipbuilders.*)

Barring Engines—

Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Buckley & Taylor, Oldham.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Foster, Joseph, & Sons, Preston.
 Galloways, Ltd., Manchester.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave, John, & Son, Ltd., Bolton.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Walmsley, Charles, & Co., Ltd., Bury.
 Wood, John and Edward, Bolton.
 Yates & Thom, Blackburn.

Bars—Furnace—

(*See Fire Bars.*)

Bars—Iron and Steel—

(*See Steel and Iron Plates and Bars.*)

Batteries—Electric—

(*See Electric Batteries.*)

Beaming, Warping and Sizing Machinery—

(*See also Textile Machinery.*)

Blackburn Loom and Weaving Machinery Making Co., (William Dickinson & Sons), Ltd., Blackburn.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Cliffe & Co., Huddersfield.
 Dodd, Samuel, Oldham.
 Hacking & Co., Bury.

Beaming, Warping and Sizing Machinery—continued.

Hattersley, George, & Sons, Ltd., Keighley.
 Holt, Thomas, Ltd., Rochdale.
 Hutchinson, Hollingworth & Co., Ltd., Huddersfield.
 Leach & Co., Rochdale.
 Livesey, Henry, Ltd., Blackburn.
 Richardson, Tuer & Co., Manchester.
 Smith, William, & Brothers, Ltd., Heywood.
 White, W. B., Colne.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Beams and Girders—

(See Bridges, Roofs, and Structural Iron and Steel Work.)

Bearing Special Metals—

(See Metals—Special.)

Belt Pulleys—

(See Mill Gear, Shafting and Shaft Fittings.)

Bending Rolls and Machines—Beams, Plates, Rails—

(See also Rail Benders.)

Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Bigwood, J., & Son, Wolverhampton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Cameron, John, Manchester.
 Campbells & Hunter, Leeds.
 Craig & Donald, Johnstone.
 Craven Brothers, Ltd., Manchester.
 Crow, Harvey & Co., Glasgow.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Edward, George, & Co., Johnstone.
 Fielding & Platt, Ltd., Gloucester.
 Galloways, Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.

Bending Rolls and Machines—Beams, Plates, Rails—continued.

Hulse & Co., Ltd., Manchester.
 Midgley & Sutcliffe, Bradford.
 Noble & Lund Felling-on-Tyne.
 Pratt, F., & Co., Ltd., Halifax.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith, G. F., Halifax.
 Smith, Hugh, & Co., Glasgow.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.

Bessemer Steel—

(See Steel and Iron Plates and Bars.)

Bessemer Steel Plant—

(See Steel Works Plant.)

Bevelling Machines for Ship's Frames—

Davis & Primrose, Leith.

Bicycles—

(See Cycles and Cycle Parts.)

Billets and Blooms—

Bolton Iron and Steel Co., Ltd., Bolton.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Fox, Samuel, & Co., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.

Bitumen Refiners—

Callendar's Cable and Construction Co., Ltd., London.

Blast Furnace Plant—*(See also Blowing Engines.)*

Adamson, Daniel, & Co., Dukinfield.
 Ashmore, Benson, Pease & Co., Ltd.,
 Stockton-on-Tees.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Fraser & Chalmers, Ltd., London.
 Furness, Sir C., Westgarth & Co.,
 Ltd., Middlesbrough.
 Galloways, Ltd., Manchester.
 Stevenson & Co., Ltd., Preston.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.
 Yates & Thom, Blackburn.

Bleaching Machinery—*(See also Dyeing Machinery.)*

Bentley & Jackson, Ltd., Bury.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Craig, A. F., & Co., Ltd., Paisley.
 Downham, J., & Co., Bury.
 Dykes, G. & J., Bury.
 Edmeston, Archd., & Sons, Man-
 chester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brothers, Bolton.
 Jefferson, Joseph, & Brothers, Bradford.
 Lancaster & Tonge, Ltd., Manchester.
 Matthews, William, & Co., Man-
 chester.
 Riley, J. H., & Co., Bury.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robinson, Joseph, & Co., Manchester.
 Strang, Joseph, Ltd., Ransbottom.
 Thomson, Son & Co., Dundee.
 Walker, Samuel, Manchester.

Blocks—Wood and Iron—*(See also Pulley-Blocks.)*

Coubro & Scrutton, London.

Blooms—*(See Billets and Blooms.)***Blowers and Exhausters—**

Bradley, R., & Co., Wakefield.
 Brown Brothers & Co., Ltd., Edin-
 burgh.
 Carrick & Wardale, Gateshead-on-Tyne.
 Daglish, Robert, & Co., St. Helens.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Empire Engineering Co., Manchester.
 Foster, Joseph, & Sons, Preston.
 Goodwin, Arnold, & Son, London.
 Greenock Foundry Co., Greenock.
 Günther, W., & Sons, Oldham.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Ledward, T., & Co., London and
 Manchester.
 Lees, Anderson & Co., Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 Meldrum Brothers, Manchester.
 Milne, James, & Son, Ltd., Edinburgh.
 Pope, W., & Son, Ltd., London.
 Thwaites Brothers, Ltd., Bradford.
 Waller, George, & Co., Stroud.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.

**Blowing Engines—for Furnace
 Blast, etc.—**

Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Carmichael, James, & Co., Ltd.,
 Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Fraser & Chalmers, Ltd., London.
 Furness, Sir C., Westgarth & Co.,
 Ltd., Middlesbrough.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Kitson & Co., Leeds.
 Nasmyth, Wilson & Co., Ltd.,
 Manchester.
 St. George's Ironworks, Ltd., Man-
 chester.
 Saxon, George, Manchester.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ransbottom.
 Stevenson & Co., Ltd., Preston.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Watson, Henry, & Sons, Newcastle-
 on-Tyne.
 Whitaker, C., & Co., Bradford.
 Worsley Mesnes Iron Works Co.,
 Wigan.
 Yates & Thom, Blackburn.

ENGINEERING EMPLOYERS' FEDERATION

Bobbin-Making Machinery—

Ayrton, William, & Co., Manchester.
Heap, William, & Co., Ltd., Ashton-under-Lyne.
White, Thomas, & Sons, Paisley.

Boiler Furnaces—

Adamson, Daniel, & Co., Dukinfield.
Adamson, Joseph, & Co., Hyde.
Beeley, Thomas, Hyde.
Bennis, Edward, & Co., Ltd., Bolton.
Brown, John, & Co., Ltd., Sheffield.
Burnet, Lindsay, & Co., Glasgow.
Clark, George, Ltd., Sunderland.
Davy Brothers, Ltd., Sheffield.
Donkin, Bryan, & Co., Ltd., London.
Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Edie, Henry, & Co., London.
Foster, Joseph, & Sons, Preston.
Galloways, Ltd., Manchester.
Hick, Hargreaves & Co., Ltd., Bolton.
Leeds Forge Co., Ltd., Leeds.
Lees, Anderson & Co., Glasgow.
M'Kie & Baxter, Glasgow.
Meldrum Brothers, Manchester.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Oldham Boiler Works Co., Ltd., Oldham.
Oxley Brothers, Ltd., Sheffield.
Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Richardson, Tuer & Co., Manchester.
Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
Stevenson & Co., Ltd., Preston.
Yates & Thom, Blackburn.

Boiler-Making Machine Tools—

(See Machine Tools.)

Boiler Mountings—

(See also Engine and Boiler Fittings.)

Adams, Thomas, Manchester.
Adamson, Daniel, & Co., Dukinfield.
Adamson, Joseph, & Co., Hyde.
Bailey, W. H., & Co., Ltd., Manchester.
Baldwin, James, Keighley.
Beeley, Thomas, Hyde.

Boiler Mountings—continued.

Bennis, Edward, & Co., Ltd., Bolton.
Bigwood, J., & Son, Wolverhampton.
Billington & Newton, Longport.
Bolton Iron and Steel Co., Ltd., Bolton.
Burnet, Lindsay, & Co., Glasgow.
Carmichael, James, & Co., Ltd., Dundee.
Carter, James, & Sons, Stalybridge.
Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
Coates, Victor, & Co., Ltd., Belfast.
Cochran & Co., Birkenhead.
Cockburn, David, Glasgow.
Dewrance & Co., London.
Douglass Brothers, Ltd., Blaydon-on-Tyne.
Empire Engineering Co., Manchester.
Feather, George R., Bolton.
Fletcher Brothers, Ashton-under-Lyne.
Foster, Joseph, & Sons, Preston.
Frost & Sons, London.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
Galloways, Ltd., Manchester.
Greenock Foundry Co., Greenock.
Gresham & Craven, Ltd., Manchester.
Lambeth Brass and Iron Co., Ltd., London.
Lancaster & Tonge, Ltd., Manchester.
Madan, Charles S., & Co., Manchester.
Marchant, G. M., Huddersfield.
Meadowcroft, C. H., & Brothers, Dukinfield.
Moorhouse, Sydney, & Co., Stalybridge.
Moorhouse, Walter, & Co., Stalybridge.
Morton & Edwards, Stalybridge.
Musgrave, John, & Son, Ltd., Bolton.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Pease, Rhodes & Co., Ltd., Bradford.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Sharples, William, & Co., Ramsbottom.
Smith, G. F., Halifax.
Stevenson & Co., Ltd., Preston.
Stone, J., & Co., London.
Storey, Isaac, & Sons, Manchester.
Taylor, Robert, & Sons, Huddersfield.
Tinker, Shenton & Co., Ltd., Hyde.
Turnbull, Alexander, & Co., Glasgow.
Watson, Henry, & Sons, Newcastle-on-Tyne.
Wilkinson, Wm., & Co., Ltd., Wigan.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
Yates & Thom, Blackburn.

Boilers—Steam—**Auxiliary and Donkey—**

Abernethy, James, & Co., Aberdeen.
 Adamson, Daniel, & Co., Dukinfield.
 Amos & Smith, Hull.
 Booth, Joseph, & Brothers, Leeds.
 Burnet, Lindsay, & Co., Glasgow.
 Carmichael, James, & Co., Ltd., Dundee.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clayton, Son & Co., Ltd., Leeds.
 Clyne, Mitchell & Co., Aberdeen.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Cowen, G. R., & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Croom & Arthur, Leith.
 Daglish, Robert, & Co., St. Helens.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Dunsuir & Jackson, Glasgow.
 Dunston Engine Works Co., The, Dunston-on-Tyne.
 Eltringham, J. T., & Co., South Shields.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Glengall Iron Works, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Green, Thomas, & Son, Ltd., Leeds.
 Greenock Foundry Co., Greenock.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hawthorn & Co., Ltd., Leith.
 Holdsworth & Sons, Bradford.
 Holmes, C. D., & Co., Hull.
 Inglis, A. & J., Glasgow.
 Jackson & Brother, Bolton.
 Jones, John, & Sons, Liverpool.
 Lees, Anderson & Co., Glasgow.
 London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 Morton, S. & H., & Co., Leith.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Ramage & Ferguson, Ltd., Leith.
 Readhead, John, & Sons, South Shields.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Simons, William, & Co., Ltd., Renfrew.

Auxiliary and Donkey—*continued.*

Southgate Engineering Co., Ltd., New Southgate, near London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Taylor, Robert, & Sons, Huddersfield.
 Tinker, Shenton & Co., Ltd., Hyde.
 Walker Brothers, Wigan.
 Workman, Clark & Co., Ltd., Belfast.

Land—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Adamson, Daniel, & Co., Dukinfield.
 Adamson, Joseph, & Co., Hyde.
 Amos & Smith, Hull.
 Beeley, Thomas, Hyde.
 Burnet, Lindsay, & Co., Glasgow.
 Carmichael, James, & Co., Ltd., Dundee.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clayton, Son & Co., Ltd., Leeds.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Craig, A. F., & Co., Ltd., Paisley.
 Croom & Arthur, Leith.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Dunlop, David J., & Co., Port-Glasgow.
 Dunsuir & Jackson, Glasgow.
 Dunston Engine Works Co., The, Dunston-on-Tyne.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fleming & Ferguson, Ltd., Paisley.
 Foster, Joseph, & Sons, Preston.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Galloway, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Gourlay Brothers & Co., Dundee.
 Green, Thomas, & Son, Ltd., Leeds.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.

Boilers—Steam—continued.**Land—continued.**

Hawthorns & Co., Ltd., Leith.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Holdsworth & Sons, Bradford.
 Holmes, C. D., & Co., Hull.
 Inglis, A. & J., Glasgow.
 Jackson & Brother, Bolton.
 Jones, John, & Sons, Liverpool.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Lees, Anderson & Co., Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 M'Laren, J. & H., Leeds.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mar-hall, Sons & Co., Ltd., Gainsborough.
 Morton, S. & H., & Co., Leith.
 Musgrave, John, & Son, Ltd., Bolton.
 Napier, R., & Sons, Ltd., Glasgow.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 North Eastern Marine Engineering Co., Ltd., Sunderland.
 Oldham Boiler Works Co., Ltd., Oldham.
 Peckett & Sons, Bristol.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Simons, William, & Co., Ltd., Renfrew.
 Sinclair, George, Leith.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Taylor, Robert, & Sons, Huddersfield.
 Tinker, Shenton & Co., Ltd., Hyde.
 Walker Brothers, Wigan.
 Yates & Thom, Blackburn.

Marine—

Adamson, Daniel, & Co., Dukinfield.
 Allsup & Co., Ltd., Preston.
 Amos & Smith, Hull.
 Barclay, Curle & Co., Ltd., Glasgow.
 Blackwood & Gordon, Port-Glasgow.
 Blair & Co., Ltd., Stockton-on-Tees.
 Bow, M'Lachlan & Co., Paisley.
 Brodie, John, & Co., Ltd., London.
 Burnet, Lindsay, & Co., Glasgow.
 Caird & Co., Ltd., Greenock.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.

Marine—continued.

Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George, Ltd., Sunderland.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Croom & Arthur, Leith.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Dunlop David J., & Co., Port-Glasgow.
 Dunsmuir & Jackson, Glasgow.
 Dunston Engine Works Co., The, Dunston-on-Tyne.
 Eltringham, J. T., & Co., South Shields.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fleming & Ferguson, Ltd., Paisley.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Glengall Iron Works, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Greenock Foundry Co., Greenock.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Hodge, Samuel, & Sons, Ltd., London.
 Holmes, C. D., & Co., Hull.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 Lewis, John, & Sons, Aberdeen.
 Lohnitz & Co., Ltd., Renfrew.
 London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 M'Kie & Baxter, Glasgow.
 Morton, S. & H., & Co., Leith.
 Muir & Houston, Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Ramage & Ferguson, Ltd., Leith.
 Rankin & Blackmore, Greenock.
 Readhead, John, & Sons, South Shields.

Boilers—Steam—continued.**Marine—continued.**

Redpath & Paris, London.
 Richardson, Thonias, & Sons, Ltd., Hartlepool.
 Richardson, Wigham, & Co., Newcastle-on-Tyne.
 Ross & Duncan, Glasgow.
 Rowan, David, & Son, Glasgow.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Simons, William, & Co., Ltd., Renthfrew.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Tinker, Shenton & Co., Ltd., Hyde.
 Workman, Clark & Co., Ltd., Belfast.

Water Tube—

Adamson Daniel, & Co., Dukinfield.
 Burnet, Lindsay, & Co., Glasgow.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Coates, Victor, & Co., Ltd., Belfast.
 Coulthard, T., & Co., Preston.
 Davy Brothers, Ltd., Sheffield.
 Doxford, W., & Sons, Ltd., Sunderland.
 Dunsmuir & Jackson, Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eltringham, J. T., & Co., South Shields.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fleming & Ferguson, Ltd., Paisley.
 Fraser & Chalmers, Ltd., London.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Galloways, Ltd., Manchester.
 Gourlay Brothers & Co., Dundee.
 Greenock Foundry Co., Greenock.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Inglis, A. & J., Glasgow.
 Kincaid, John G., & Co., Greenock.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.

Water Tube—continued.

London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 M'Kie & Baxter, Glasgow.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Maudslay, Sons & Field, Ltd., London.
 Muir & Houston, Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Penn, John, & Sons, Ltd., London.
 Readhead, John, & Sons, South Shields.
 Redpath & Paris, London.
 Rose, Downs & Thompson, Ltd., Hull.
 Rowan, David, & Son, Glasgow.
 Thornycroft, John I., & Co., London.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Workman, Clark & Co., Ltd., Belfast.
 Yarrow & Co., Ltd., London.

Boiler Tubes—

(See also **Tubes.**)

Brown, John, & Co., Ltd., Sheffield.
 Galloways, Ltd., Manchester.

Bolt and Nut Making Machinery—

Craven Brothers, Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendall & Gent, Manchester.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Shepherd, Hill & Co., Ltd., Leeds.

Bolts, Rivets, Screws, Nuts and Washers—

(See also Screws and Studs.)

Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Ford-Smith, F., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Jardine, John, Nottingham.
 Kirby Banks Screw Co., Ltd., Leeds.
 Manganeze Bronze and Brass Co., Ltd., London.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Mercer, Edward, Manchester.
 Nottingham Engineering Co., Ltd., Nottingham.
 Pool, L., & Son, Leeds.
 Stone, J., & Co., London.

Boring and Tapping Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellars, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Redman, C., & Sons, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Bookbinders' Machinery—

Bremner Machine Co., Otley.
 Dawson, H. & J., Bradford.
 Dawson & Sons, Otley.
 Furnival & Co., Manchester.
 Greig, John, & Sons, Edinburgh.
 Hopkinson & Cope, London.
 Miller & Richard, Edinburgh.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Payne & Sons, Otley.
 Pearson & Bennion, Ltd., Leicester.
 Richmond, Joseph, & Co., London.

Box-Making Machinery—

Cole, T. & W., London.
 Glover, M., & Co., Leeds.
 M'Dowall, John, & Sons, Johnstone.
 Sagar, J., & Co., Halifax.

Brakes—Railway—

(See also Railway Plant.)
 Fraser & Chalmers, Ltd., London.

Boot and Shoe Making Machinery—

Bradbury & Co., Ltd., Oldham.
 Davis, A. J., Leicester.
 Greenwood & Batley, Ltd., Leeds.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Glover, M., & Co., Leeds.
 Mudd, W. R., & Co., Leicester.
 Pearson & Bennion, Ltd., Leicester.
 Pegg, Samuel, & Sons, Leicester.
 Standard Engineering Co., Leicester.

Brass and Bronze Founders and Finishers—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adams, Thomas, Manchester.
 Adams, W. W., London.
 Adamson, Daniel, & Co., Dukinfield.
 Allen, Harrison & Co., Manchester.

Brass and Bronze Founders and Finishers—continued.

Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Bailey & Garnett, Ltd., Stalybridge.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Barns, J. C., London.
 Barraclough, Joseph, & Sons, Barnsley.
 Barrett, R., & Son, Ltd., London.
 Beck & Co., Ltd., London.
 Billington & Newton, Longport.
 Blundell's London Copper and Brass Works Co., Ltd., London.
 Bowen & Co., London.
 Broad, G., & Son, London.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Carmichael, James, & Co., Ltd., Dundee.
 Carter, James, & Sons, Stalybridge.
 Central Marine Engine Works, West Hartlepool.
 Chapman, Carverhill & Co., Newcastle-on-Tyne.
 Clark, Bunnett & Co., Ltd., London.
 Clark, J. & T., Bradford.
 Clarke, T. A. W., Leicester.
 Clyne, Mitchell & Co., Aberdeen.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Cockburn, David, Glasgow.
 Cooper Brothers, Ltd., Burnley.
 Cowen, G. R., & Co., Nottingham.
 Cran, John, & Co., Leith.
 Crook, Thomas T., Bolton.
 Crow, George, London.
 Daglish, Robert, & Co., St. Helens.
 Darker, F., & Co., London.
 Dewrance & Co., London.
 Dickinson, John, & Co., Keighley.
 Dixon, S., & Son, Leeds.
 Doxford, W., & Sons, Ltd., Sunderland.
 Dryden, Thomas, Preston.
 Dykes, G. & J., Bury.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eastwood, Walter, Ashton-under-Lyne.
 Edie, Henry, & Co., London.
 Edmondson, John A., Leeds.
 Empire Engineering Co., Manchester.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Foster, Joseph, & Sons, Preston.
 Frost & Sons, London.

Brass and Bronze Founders and Finishers—continued.

Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Galloways, Ltd., Manchester.
 Ginman & Son, Plumstead.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hawthorns & Co., Ltd., Leith.
 Heald, John, Chorley.
 Henderson, D. & W., & Co., Glasgow.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jefferson, Joseph, & Brothers, Bradford.
 Jenkins, C., & Co., London.
 Johnston, R., & Co., Ltd., London.
 Johnson, William, & Sons, Leeds.
 Jones, John, & Sons, Liverpool.
 Kenworthy, Taylor & Co., Barnsley.
 Kincaid, John G., & Co., Greenock.
 Kirkham, J. & W., Bolton.
 Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Lawson, J., London.
 Livesey, Henry, Ltd., Blackburn.
 London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 Low, James F., & Co., Monifieth.
 Madan, Charles S., & Co., Manchester.
 Manganese Bronze and Brass Co., Ltd., London.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marchant, G. M., Huddersfield.
 Marner, G. W., London.
 Marsden, Ellis, Liverpool.
 Marsden, John, & Son, Liverpool.
 Mayes, John, London.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Mechan & Sons, Glasgow.
 Mellor, Moses, & Sons, Ltd., Nottingham.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morris, J., & Co., London.
 Morton & Edwards, Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.

Brass and Bronze Founders and Finishers—continued.

Needham Brothers & Brown, Barnsley.
 Noble & Lund, Felling-on-Tyne.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Phosphor Bronze Co., Ltd., London.
 Pilling, John, & Sons, Ltd., Colne.
 Pope, W., & Son, Ltd., London.
 Ranger & Hooper, London.
 Rankin & Blackmore, Greenock.
 Ratcliffe, J., & Sons, Leeds.
 Redpath & Paris, London.
 Remington, T. W., & Co., London.
 Reynolds, Jaines, & Co., Belfast.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robinson, J. H., London.
 Roger, R., & Co., Stockton-on-Tees.
 Rosling & Appleby, Bradford.
 Russell, S., & Sons, Leicester.
 Ryder, T., & Co., Manchester.
 St. George's Ironworks, Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Seager, L. J. & C., Dartford.
 Sharples, William, & Co., Ramsbottom.
 Shoard, W., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Thwaites Brothers, Ltd., Bradford.
 Tomlinson, James (Rochdale) Ltd., Rochdale.
 Wailes, George, & Co., London.
 Wainwright, Thomas, & Co., Stalybridge.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Wearmouth Foundry Co., Ltd., Sunderland.
 Wells, Jonas, Keighley.
 West, John, London.
 White, W. B., Colne.
 Whitley Partners, Leeds.
 Wilkinson, G., & Sons, Keighley.
 Wilkinson, P., & Sons, London.
 Williams Brothers, Sheffield.

Brass and Bronze Founders and Finishers—continued.

Wood, John & Edward, Bolton.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.

Brass and Copper Tubes—

(See *Tubes*.)

Brass Shells and Liners—

Lancaster & Tonge, Ltd., Manchester.
 Milne, James, & Son, Ltd., Edinburgh.
 Thwaites Brothers, Ltd., Bradford.
 Watson, Henry, & Sons, Newcastle-on Tyne.
 Wells, Jonas, Keighley.
 Whitley Partners, Leeds.

Bread and Biscuit Machinery—

Morrison, William, & Sons, Leith.

Breakers—

(See *Coal and Coke Breakers, Quartz Crushers, Stone Breakers*.)

Brewery and Distillery Plant—

Abernethy, James, & Co., Aberdeen.
 Bertrams, Ltd., Edinburgh.
 Blundell's London Copper and Brass Works, Ltd., London.
 Coates, Victor, & Co., Ltd., Belfast.
 Daglish, Robert, & Co., St. Helens.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser, John, & Son, London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hunter & English, London.
 Lancaster & Tonge, Ltd., Manchester.
 Lees, Anderson & Co., Glasgow.
 Marsden, John, & Son, Liverpool.
 Mather, Alex., & Son, Edinburgh.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Pease, Rhodes & Co., Ltd., Bradford.
 Ryder, T., & Co., Manchester.
 Waller, George, & Co., Stroud.
 Walker, James, & Son, Edinburgh.
 West End Engine Works Co., Edinburgh.
 Woods, Hamilton, & Co., Ltd., Manchester.

Brick and Tile-Making Machinery—

Bradley & Craven, Wakefield.
 Bradley, R., & Co., Wakefield.
 Clayton, Howlett & Co., London.
 Crook, Thomas T., Bolton.
 Davis, A. J., Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Douglas Forge Co., Ltd., Wigan.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser & Chalmers, Ltd., London.
 Johnson, William, & Sons, Leeds.
 Middleton, Thomas, & Co., London.
 Moore, James, & Sons, Ltd., Belfast.
 Pegg, Samuel, & Son, Leicester.
 Pullan & Mann, Leeds.
 Scholefield, R., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Thornton & Crebbin, Bradford.

Bridge Foundation Cylinders—
(*See Cylinders for Bridge Foundations.*)**Bridges, Roofs and Structural Iron and Steel Work—**

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Bennis, Edward, & Co., Ltd., Bolton.
 Berry, John, Halifax.
 Booth, Joseph, & Brothers, Leeds.
 Clark, Bennett & Co., Ltd., London.
 Clayton, Son & Co., Ltd., Leeds.
 Cole, T. & W., London.
 Cran, John, & Co., Leith.
 De Bergue & Co., Ltd., Manchester.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Edie, Henry, & Co., London.
 Eltringham, J. T., & Co., South Shields.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hall, John, & Son, Oldham.
 Hanna, Donald & Wilson, Paisley.
 Hayward Brothers & Eckstein, Ltd., London.
 Heald, John, Chorley.

Bridges, Roofs and Structural Iron and Steel Work—continued.

Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Jackson & Brother, Bolton.
 Kerr, Stuart & Co., Stoke-on-Trent.
 M'Kinnon, William, & Co., Aberdeen.
 Mather, Alex., & Son, Edinburgh.
 Mechan & Sons, Glasgow.
 Moreland, Richard, & Son, Ltd., London.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Oxley, George, & Sons, Sheffield.
 Richards, W., & Son, Leicester.
 St. Pancras Ironworks Co., Ltd., London.
 Stevenson & Co., Ltd., Preston.
 Thornton & Crebbin, Bradford.
 Turner & Co., London.
 Walker Brothers, Wigan.
 West's Gas Improvement Co., Ltd., Manchester.

Briquette-Making Machinery—

Johnson, William, & Sons, Leeds.
 Kincaid, John G., & Co., Greenock.
 Middleton, Robert, Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.

Bronze Founders—

(*See Brass and Bronze Founders.*)

Buffers—Railway—

(*See also Railway Plant.*)

Allen, Edgar, & Co., Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darlington.
 Kirkstall Forge Co., Leeds.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Turton, George, Platts & Co., Sheffield.

Buffing Wheels—

Glover, M., & Co., Leeds.
 Luke & Spencer, Ltd., Manchester.

Buoys—Mooring—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Hanna, Donald & Wilson, Paisley.
 Jones, John, & Sons, Liverpool.
 Mechan & Sons, Glasgow.

Cables—Chain—

(See Chains.)

Cables—Haulage—

(See Wire and Wire Ropes.)

Cable-Haulage Machinery—

(See Haulage Machinery and Appliances.)

Cable-Making Machinery—

Clarke, T. A. W., Leicester.
 Johnson & Phillips, Old Charlton.

Cables & Wires—Electric Light, Telegraph and Telephone.

Callender's Cable and Construction Co., Ltd., London.
 Crompton & Co., Ltd., London and Chelmsford.
 General Electric Co., Ltd., Manchester.
 Henley's, W. T., Telegraph Works Co., Ltd., London.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Phosphor Bronze Co., Ltd., London.
 Siemens Brothers & Co., Ltd., London.

Cableways—

Henderson, John M., Aberdeen.

Calenders—

Bently & Jackson, Ltd., Bury.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jackson & Brother, Bolton.
 Milne, James, & Son, Ltd., Edinburgh.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Riley, J. H., & Co., Bury.
 Robinson, Joseph, & Co., Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Thomson, Son & Co., Dundee.
 Umpherston & Co., Ltd., Leith.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Walker, Samuel, Manchester.
 Walmsley, Charles, & Co., Ltd., Bury.

Calico Printing and Dyeing Machinery—

Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Jackson & Brother, Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Riley, J. H., & Co., Bury.
 Strang, Joseph, Ltd., Ramsbottom.
 Walker, Samuel, Manchester.

Capstans—Steam, Hydraulic, Hand—

(See also Hydraulic Capstans.)
 Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Alley & Maclellan, Glasgow.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.

**Capstans—Steam, Hydraulic, Hand—
*continued.***

Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Carrick & Wardale, Gateshead-on-Tyne.
 Clarke, Chapman & Co., Gateshead-on-Tyne.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Daglish, Robert, & Co., St. Helens.
 Davis & Co., Ltd., London.
 Emerson, Walker & Thompson Brothers, Ltd., Gateshead-on-Tyne.
 Fielding & Platt, Ltd., Gloucester.
 Fisher & Co., Paisley.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Harfield & Co., Ltd., Blaydon-on-Tyne.
 Hunter & English, London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kincaid, John G., & Co., Greenock.
 Middleton, Robert, Leeds.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Napier Brothers, Ltd., Glasgow.
 Qualter, Hall & Co., Barnsley.
 Reid, Thomas, & Sons, Paisley.
 Roger, R., & Co., Stockton-on-Tees.
 Smith, Hugh, & Co., Glasgow.
 Walker Brothers, Wigan.
 West's Gas Improvement Co., Ltd., Manchester.
 Wood & Gee, Wigan.

Carbons for Electrical Purposes

Crompton & Co., Ltd., London and Chelmsford.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Siemens Brothers & Co., Ltd., London.

Carpet-Making Machinery—

(*See also Looms.*)

Craig, A. F., & Co., Ltd., Paisley.
 Crossley, John, & Co., Halifax,
 Hattersley, George, & Sons, Ltd., Keighley.

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Carpet-Making Machinery—*continued.*

Kenworthy, Royston & Co., Huddersfield.
 Smith, William, & Brothers, Ltd., Heywood.
 Taylor, Wordsworth & Co., Leeds.

Cartridge-Making Machinery—

Greenwood & Batley, Ltd., Leeds.
 Stevenson & Co., Ltd., Preston.

Cement-Mill Plant—

Clayton, Howlett & Co., London.
 Death & Harris, Leicester.
 Fraser & Chalmers, Ltd., London.
 Hind & Lund, Ltd., Preston.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Johnson, William, & Sons, Leeds.
 Pulsonieter Engineering Co., Ltd., London.
 St. George's Ironworks, Ltd., Manchester.
 Seager, L. J. & C., Dartford.
 Shepherd, Hill & Co., Ltd., Leeds.
 Waller, George, & Co., Stroud.
 Winder Brothers, Ltd., Sheffield.

Centrifugal Pumps—

(*See Pumps and Pumping Engines.*)

Chains—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Larmuth, Thomas, & Co., Manchester.
 West's Gas Improvement Co., Ltd., Manchester.

Charcoal-Making Plant—

Blake, Barclay & Co., Greenock.

Chemical Works Plant—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne,
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Calvert & Co., Huddersfield.
 Carrick & Wardale, Gateshead-on-Tyne.
 Craig, A. F., & Co., Ltd., Paisley.
 Daglish, Robert, & Co., St. Helens.
 Edie, Henry, & Co., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Hunter & English, London.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson, William, & Sons, Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mechan & Sons, Glasgow.
 Meldrum Brothers, Manchester.
 Riley, J. F., Huddersfield.
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Walker Brothers, Wigan.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Cloth-Finishing Machinery—

Bentley & Jackson, Ltd., Bury.
 Bywater, William, Leeds.
 Craig, A. F., & Co., Ltd., Paisley.
 Crossley, John, & Co., Halifax.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Gadd, Thomas (Hulse & Co., Ltd. Proprietors), Manchester.
 Hacking & Co., Bury.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jackson & Brother, Bolton.
 Kenworthy, Royston & Co., Huddersfield.
 Kilburn, R., & Sons, Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Riley, J. H., & Co., Bury.
 Robertson & Orchar, Ltd., Dundee.
 Robinson, Joseph, & Co., Manchester.
 Smith, William, & Brothers, Ltd., Heywood.
 Strang, Joseph, Ltd., Ramsbottom.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Taylor, Wordsworth & Co., Leeds.
 Thomson, Son & Co., Dundee.
 Tomlinson, G. W., Huddersfield.
 Tomlinson, James (Rochdale), Ltd., Rochdale.
 Walker, Samuel, Manchester.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Chilled and Grain Rolls—

(See Rolls and Rolling Plant.)

Chucks—

Birch, G., & Co., Manchester.
 Holyrod, John, & Co., Ltd., Rochdale.
 Pratt, F., & Co., Ltd., Halifax.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Wade, Josiah, Ltd., Halifax.

Cloth-Raising Machinery—

Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Kenworthy, Royston & Co., Huddersfield.
 Riley, J. H., & Co., Bury.

Clutches—Friction—

(See Friction Clutches.)

Coal and Coke Breakers—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Blake, Barclay & Co., Greenock.

Coal and Coke Breakers—continued.

Dickinson, John, & Co., Keighley.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Ryder, William, Bolton.
 Spetch & Thomas, Bradford.
 Thwaites Brothers, Ltd., Bradford.
 Waller, George, & Co., Stroud.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 Winder Brothers, Ltd., Sheffield.

Coal Drills and Cutters—

(See Rock Drills.)

Coal Hoists—

Bennis, Edward, & Co., Ltd., Bolton.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Fraser & Chalmers, Ltd., London.
 Goodwin, Arnold, & Son, London.
 Haigh, W. B., & Co., Oldham.
 Kincaid, John G., & Co., Greenock.
 Qualter, Hall & Co., Barnsley.
 Stevenson & Co., Ltd., Preston.
 Turner & Co., London.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 Wood & Gee, Wigan.

Coal-Screening and Washing Plant—

Bradley, R., & Co., Wakefield.
 Qualter, Hall & Co., Barnsley.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 Wood & Gee, Wigan.

Cocks—

(See Valves, Cocks, etc.; also Engine and Boiler Fittings.)

Cocoa and Coffee Machinery—

Abernethy, James, & Co., Aberdeen.
 Kenworthy, Royston & Co., Huddersfield.
 Perkin & Co., Ltd., Leeds.
 Wailes, George, & Co., London.

Cogging Mills—

(See Rolls and Rolling-Mill Plant.)

Coke Breakers—

(See Coal and Coke Breakers.)

Coke Ovens—

Ashmore, Benson, Pease & Co., Ltd.
 Stockton-on-Tees.

Colliery Plant—

(See Mining Machinery.)

Concrete-Mixing Plant—

(See also Mortar Mills.)

Douglas Forge Co., Ltd., Wigan.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Stothert & Pitt, Ltd., Bath.
 Waller, George, & Co., Stroud.

Condensing and Cooling Plant—

Ashton, Frost & Co., Ltd., Blackburn.
 Bailey, W. H., & Co., Ltd., Manchester.
 Browett, Lindley & Co., Ltd., Patrixcroft.
 Caird & Rayner, London.
 Carrick & Wardale, Gateshead-on-Tyne.
 Carruthers, J. H., & Co., Glasgow.
 Craig, A. F., & Co., Ltd., Paisley.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser, John, & Son, London.
 Galloways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Hanna, Donald & Wilson, Paisley.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Jackson, P. R., & Co., Ltd., Manchester.
 Kirkaldy, John, Ltd., London.
 Ledward, T., & Co., London and Manchester.

Condensing and Cooling Plant—cont.

Manlove, Alliott & Co., Ltd., Nottingham.
 Milne, James, & Son, Ltd., Edinburgh.
 North-Eastern Marine Engineering Co., Ltd., Sunderland.
 Owen, Brazil & Holborow, Bristol.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Saxon, George, Manchester.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Thomson, Son & Co., Dundee.
 Vauxhall Ironworks Co., Ltd., London.
 Wailes, George, & Co., London.
 Weir, G. & J., Ltd., Glasgow.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Contractors' Plant—

Berry, John, Halifax.
 Booth, Joseph, & Brothers, Leeds.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Crook, Thomas T., Bolton.
 Dean, Smith & Grace, Keighley.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Glover, M., & Co., Leeds.
 Henderson, John M., Aberdeen.
 Hudswell, Clarke & Co., Leeds.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Pratt, F., & Co., Ltd., Halifax.
 Shepherd, Hill & Co., Ltd., Leeds.
 Siemens Brothers & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Spencer, John, & Co., Keighley.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Ward & Haggas, Keighley.

Conveyors and Elevators—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Bennis, Edward, & Co., Ltd., Bolton.
 Blake, Barclay & Co., Greenock.

Conveyors and Elevators—continued.

Booth, Joseph, & Brothers, Leeds.
 Calvert & Co., Huddersfield.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Cran, John, & Co., Leith.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fraser & Chalmers, Ltd., London.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Henderson, John M., Aberdeen.
 Hind & Lund, Ltd., Preston.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (London and Leicester), Ltd., Leicester.
 Johnson, William, & Son, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Lees, Anderson & Co., Glasgow.
 Mather, Alex., & Son, Edinburgh.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Qualter, Hall & Co., Barnsley.
 Pickering, Ltd., Stockton-on-Tees.
 Pullan & Mann, Leeds.
 Stevenson & Co., Ltd., Preston.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 West End Engine Works Co., Edinburgh.
 West's Gas Improvement Co., Ltd., Manchester.
 Wood & Gee, Wigan.
 Wren, Henry, & Co., Manchester.

Copper Smelters and Refiners—

Elmore's Patent Copper Depositing Co., Ltd., Leeds.

Coppersmiths and Braziers—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Allen, Harrison & Co., Manchester.
 Blundell's London Copper and Brass Works Co., Ltd., London.
 Caird & Rayner, London.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Feather, George R., Bolton.

Coppersmiths and Braziers—continued.

Greenock Foundry Co., Greenock.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Jenkins, C., & Co., London.
 Manlove, Allott & Co., Ltd., Nottingham.
 Marsden, Ellis, Liverpool.
 Marsden, John, & Son, Liverpool.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Pease, Rhodes & Co., Ltd., Bradford.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Roger, R., & Co., Stockton-on-Tees.
 Ryder, T., & Co., Manchester.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Co., Ltd., London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Wailes, George, & Co., London.
 Wearmouth Foundry Co., Ltd., Sunderland.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Copper Tube Drawing Plant—

(See **Tube Drawing Plant.**)

Copper Tubes—

(See **Tubes.**)

Cord and Braid Machinery—

(See **Rope, Twine and Braid Machinery.**)

Cornish Boilers—

(See **Boilers—Steam.**)

Corn-Mill Machinery—

Foster, Joseph, & Sons, Preston.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Hind & Lund, Ltd., Preston.
 Mather, Alex., & Son, Edinburgh.
 Tomlinson, James (Rochdale), Ltd., Rochdale.

Cotton-Carding Machinery—

(See **Cotton Preparing and Spinning Machinery.**)

Cotton Preparing and Spinning Machinery—

Ashworth, Elijah, Manchester.
 Atherton Brothers, Ltd., Preston.
 Bailey & Garnett, Ltd., Stalybridge.
 Brooks & Doxey, Ltd., Manchester.
 Butterworth & Dickinson, Burnley.
 Curtis, Sons & Co., Manchester.
 Dobson & Barlow, Ltd., Bolton.
 Dodd, Samuel, Oldham.
 Hacking & Co., Bury.
 Harding, Richardson, Rhodes & Co., Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holt, Thomas, Ltd., Rochdale.
 Lees, Asa, & Co., Ltd., Oldham.
 Mason, John, Rochdale.
 Platt Brothers & Co., Ltd., Oldham.
 Richardson, Tuer & Co., Manchester.
 Robinson, William, & Son, Oldham.
 Smith, William, & Brothers, Ltd., Heywood.
 Tatham, William, & Co., Rochdale.
 Taylor, Lang & Co., Ltd., Stalybridge.
 White, W. B., Colne.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Cotton Presses—

(See **Presses—Screw and Steam Hydraulic Presses.**)

Cotton Waste, Wadding, etc., Machinery—

Ashworth, Elijah, Manchester.
 Brooks & Doxey, Ltd., Manchester.
 Curtis, Sons & Co., Manchester.
 Dobson & Barlow, Ltd., Bolton.
 Dodd, Samuel, Oldham.
 Dykes, G. & J., Bury.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holt, Thomas, Ltd., Rochdale.
 Lees, Asa, & Co., Ltd., Bolton.
 Tatham, William, & Co., Rochdale.

Couplings—Railway—

Douglass Brothers, Ltd., Blaydon-on-Tyne.
Turton, George, Platts & Co., Sheffield.

Couplings—Shaft—

(See **Mill Gearing, Shafting and Shaft Fittings.**)

Cranes and Travellers—Steam, Hydraulic, Electric—

(See also **Electric Cranes, Hydraulic Cranes and Goliath Cranes.**)

Abernethy, James, & Co., Aberdeen.
Adamson, Joseph, & Co., Hyde.
Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
Arrol, Sir William, & Co., Ltd., Glasgow.
Ashton, Frost & Co., Ltd., Blackburn.
Barker, John, & Sons, Ltd., Oldham.
Bennis, Edward, & Co., Ltd., Bolton.
Berry, Henry, & Co., Leeds.
Berry, John, Halifax.
Bigwood, J., & Son, Wolverhampton.
Booth, Joseph, & Brothers, Leeds.
Bridges, Thomas, & Sons, Wolverhampton.
Brightside Foundry Co., Ltd., Sheffield.
Broadbent, Thomas, & Sons, Ltd., Huddersfield.
Brown Brothers & Co., Ltd., Edinburgh.
Calvert & Co., Huddersfield.
Carrick & Ritchie, Edinburgh.
Carrick & Wardale, Gateshead-on-Tyne.
Chaplin, Alex., & Co., Glasgow.
Clark, Bunnett & Co., Ltd., London.
Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
Clark, J. & T., Bradford.
Clyne, Mitchell & Co., Aberdeen.
Coates, Victor, & Co., Ltd., Belfast.
Cowans, Sheldon & Co., Ltd., Carlisle.
Craig, A. F., & Co., Ltd., Paisley.
Craven Brothers, Ltd., Manchester.

Cranes and Travellers—Steam, Hydraulic, Electric—continued.

Crompton & Co., Ltd., London and Chelmsford.
Davis & Primrose, Leith.
Dickinson, John, & Co., Keighley.
Dougill, Alf., & Co., Ltd., Leeds.
Dryden, Thomas, Preston.
Easton, Anderson & Goliuen, Ltd., Erith.
Fielding & Platt, Gloucester.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Galloways, Ltd., Manchester.
Goodwin, Arnold, & Son, London.
Grieve, John, & Co., Motherwell.
Hanna, Donald & Wilson, Paisley.
Henderson, John M., Aberdeen.
Hetherington, John, & Sons, Ltd., Manchester.
Hick, Hargreaves & Co., Ltd., Bolton.
Higginbottom & Mannock, Manchester.
Holmes, J. H., & Co., Newcastle-on-Tyne.
Hulse & Co., Ltd., Manchester.
Hunter & English, London.
Jackson, P. R., & Co., Ltd., Manchester.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Johnson & Phillips, Old Charlton.
Kincaid, John G., & Co., Greenock.
Larmuth, Thomas, & Co., Manchester.
Leeds Engineering and Hydraulic Co., Leeds.
Marshall, Fleming & Jack, Motherwell.
Mavor & Coulson, Ltd., Glasgow.
Middleton, Robert, Leeds.
Moreland, Richard, & Son, Ltd., London.
Musgrave Brothers, Leeds.
Napier Brothers, Ltd., Glasgow.
Nasmyth, Wilson & Co., Ltd., Manchester.
Oldroyd, Edwin, & Co., Ltd., Leeds.
Pickering, Ltd., Stockton-on-Tees.
Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
Rice & Co., Leeds.
Richmond, Joseph, & Co., Ltd., London.
Riley, J. F., Huddersfield.
Roger, R., & Co., Stockton-on-Tees.
Ross, R. G., & Son, Glasgow.
Russell, George, & Co., Motherwell.
Russell, S., & Sons, Leicester.
St. George's Ironworks, Ltd., Manchester.

**Cranes and Travellers—Steam,
Hydraulic, Electric—continued.**

Schofield & Taylor, Huddersfield.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Shanks, Thomas, & Co., Johnstone.
 Siemens Brothers & Co., Ltd., London.
 Smith, Hugh, & Co., Glasgow.
 Smith, John, Keighley.
 Smith, Thomas, Leeds.
 Southgate Engineering Co., Ltd.,
 New Southgate, near London.
 Spencer, James, & Co., Manchester.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stoerhert & Pitt, Ltd., Bath.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor & Hubbard, Leicester.
 Unipherson & Co., Ltd., Leith.
 Vaughan & Son, Manchester.
 Waygood, R., & Co., Ltd., London.
 Whitaker, C., & Co., Bradford.
 Wood, John & Edward, Bolton.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Crank Axles—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Ince Forge Co., Wigan.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Vickers, Sons & Maxim, Ltd., Sheffield.
 White, W. B., Colne.
 Woodhouse & Rixson, Sheffield.

Crank Shafts—

(See also *Shafting—Marine*; and *Forgings*.)

Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester and Newcastle-on-Tyne.
 Bigwood, J., & Son, Wolverhampton.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown Brothers & Co., Ltd., Edinburgh.
 Brown, John, & Co., Ltd., Sheffield.
 Calvert & Co., Huddersfield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George, Ltd., Sunderland.
 Crow, Harvey & Co., Glasgow.
 Darlington Forge Co., Ltd., Darlington.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Ince Forge Co., Wigan.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessel, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Kirkstall Forge Co., Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 M'Kie & Baxter, Glasgow.
 Musgrave, John, & Son, Ltd., Bolton.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Ramage & Ferguson, Ltd., Leith.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.

Crank Shafts—*continued.*

Scott & Hodgson, Manchester.
 Smith, Daniel, & Co., Wolverhampton.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Strang, Joseph, Ltd., Ramisbottom.
 Urnson & Thompson, Oldham.
 Vickers, Sons & Maxim, Ltd., Sheffield.
 Wainwright, Thomas, & Sons, Stalybridge.
 Walker Brothers, Wigan.
 White, W. B., Colne.
 Wood, John & Edward, Bolton.
 Woodhouse & Rixson, Sheffield.

Creosoting Plant—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Coates, Victor, & Co., Ltd., Belfast.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Daglish, Robert, & Co., St. Helens.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eltringham, J. T., & Co., South Shields.
 Fraser, John, & Son, London.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Pearn, Frank, & Co., Ltd., Manchester.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Waller, George, & Co., Stroud.

Crucibles—

Oxley Brothers, Ltd., Sheffield.
 Walker, Eaton & Co., Sheffield.

Crushers—

See Ore-Crushing Machinery, Oil-Crushing Machinery, Coal and Coke Breakers, Seed-Crushing Machinery, Stone Breakers.

Cupolas—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Fraser & Chalmers, Ltd., London.
 Hanna, Donald & Wilson, Paisley.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Stevenson & Co., Ltd., Preston.
 Thwaites Brothers, Ltd., Bradford.

Cycles and Cycle Parts—

Bradbury & Co., Ltd., Oldham.
 Campion Cycle Co., Ltd., Nottingham.
 Cook, S., & Co., Bury.
 Crowley, John, & Co., Ltd., Sheffield.
 Eclipse Machine Co., Ltd., Oldham.
 Gazelle Cycle Co., Nottingham.
 Humber & Co., Ltd., Nottingham.
 Humber, Syner & Co., Ltd., Nottingham.
 "Little John" Cycle Co., Ltd., Nottingham.
 Macgregor Cycle and Engineering Co., Ltd., Nottingham.
 New Found Cycle Components Co., Leicester.
 Raleigh Cycle Co., Ltd., Nottingham.
 Robin Hood Cycle Co., Ltd., Nottingham.
 Simpson's Lever Chain and Cycle Co., Draycott.
 Springfield Cycle Co., Ltd., Nottingham.
 Sudworth & Settle, Ltd., Nottingham.
 Trent Cycle Co., Ltd., Nottingham.
 Victor Cycle Co., Ltd. (John Jardine), Nottingham.
 Webb, R. W., Ltd., Draycott.
 Whiteley's Acme Cycle Co., Ltd., Leeds.

Cylinders for Bridge Foundations—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Eltringham, J. T., & Co., South Shields.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Pease, Rhodes & Co., Ltd., Bradford.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Thornton & Crebbin, Bradford.

Cylinders for Gas and Air—

Lees, Anderson & Co., Glasgow.
 Pope, W., & Son, Ltd., London.

Dairy Machinery—

Bradford, T., & Co., Manchester.
 Milne, James, & Son, Ltd., Edinburgh.

Derrick Cranes—*(See Cranes.)***Desiccators—**

Farmer, Sir James, & Sons, Ltd.,
Manchester.
Manlove, Alliott & Co., Ltd., Not-
tingham.

Destructors—Refuse—

Adamson, Daniel, & Co., Dukinfield.
Manlove, Alliott & Co., Ltd., Not-
tingham.
Meldrum Brothers, Manchester.

Diggers—Steam—*(See Excavators—Steam.)***Disintegrators and Pulverizers**

Barry, Henry, & Co., Ltd., Aberdeen.
Fraser & Chalmers, Ltd., London.
Good & Menzies, Ltd., Hull.
Greenwood & Batley, Ltd., Leeds.
Harpers, Ltd., Aberdeen.
Harrison & Hammond, Wakefield.
Hind & Lund, Ltd., Preston.
Johnson, William, & Sons, Leeds.
Kerr, Stuart & Co., Stoke-on-Trent.
Middleton, Robert, Leeds.
Qualter, Hall & Co., Barnsley.
Rose, Downs & Thompson, Ltd.,
Hull.
Strang, Joseph, Ltd., Ramsbottom.

Distilling Apparatus—Water—*(See also Oil Distilling Plant.)*

Burnet, Lindsay, & Co., Glasgow.
Caird & Rayner, London.
Chaplin, Alex., & Co., Glasgow.
Fawcett, Preston & Co., Ltd., Liver-
pool.
Holliday, Read, & Sons, Ltd., Hud-
dersfield.
Normandy's Patent Marine Ærated
Fresh Water Co., Ltd., London.
Pease, Rhodes & Co., Ltd., Leeds.
Weir, G. & J., Ltd., Glasgow.

Distilling Plant—*(See Brewery and Distilling Plant.)***Diving Apparatus—**

Pulsometer Engineering Co., Ltd.
London.
Siebe, Gorman & Co., London.

Donkey Boilers—*(See Boilers—Steam.)***Dredgers and Dredge Plant—**

Amos & Smith, Hull.
Drysdale & Co., Glasgow.
Fleming & Ferguson, Ltd., Paisley.
Gwynne & Co., London.
Hunter & English, London.
Jackson, P. R., & Co., Ltd., Man-
chester.
Jessop & Appleby Brothers (Leicester
and London), Ltd., Leicester.
Kincaid, John G., & Co., Greenock.
Lobnitz & Co., Ltd., Renfrew.
Rose, Downs & Thompson, Ltd.,
Hull.
Simons, William, & Co., Ltd., Ren-
frew.
Stewart, John, & Son, Ltd., London.
Vickers, Sons & Maxim, Ltd., Bar-
row-in-Furness.

Drilling Machines—*(See also Radial Drills, Boring and
Tapping Machines.)*

Armstrong, Sir W. G., Whitworth
& Co., Ltd., Manchester.
Asquith, William, Halifax.
Atlas Engineering Co., Manchester.
Berry, Francis, & Sons, Sowerby
Bridge.
Bolton Engineering Co., Bolton.
Buckton, Joshua, & Co., Ltd., Leeds.
Campbells & Hunter, Leeds.
Craven Brothers, Ltd., Manchester.
Crookes, Roberts & Co., Sheffield.
Crossley & Co., Johnstone.
Darling & Sellers, Ltd., Keighley.
Dean, Smith & Grace, Ltd., Keighley.
Dickinson, John, & Co., Keighley.
Fraser, Douglas, & Sons, Arbroath.

Drilling Machines—continued.

Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Keighley Engineering Co., Keighley.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Scott Brothers, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Siemens Brothers & Co., Ltd., London.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Driving Engines—continued.

Calvert & Co., Huddersfield.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Combe, Barbour & Combe, Ltd., Belfast.
 Cowen, G. R., & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Paisley.
 Crook, Thomas T., Bolton.
 Davy Brothers, Ltd., Sheffield.
 Death & Harris, Leicester.
 Donkin, Bryan, & Co., Ltd., London.
 Downham, J., & Co., Bury.
 Dryden, Thomas, Preston.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fleming & Ferguson, Ltd., Paisley.
 Foster, Joseph, & Sons, Preston.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Gimsons, Ltd., Stalybridge.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Goodwin, Arnold, & Son, London.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Haswell, J. Stenson, & Co., Leicester.
 Heald, John, Chorley.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brothers, Bolton.
 Jessop & Appleby Brothers (London and Leicester), Ltd., Leicester.
 Kenworthy, Taylor & Co., Barnsley.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Lancaster & Tonge, Ltd., Manchester.
 Lees, Anderson & Co., Glasgow.
 M'Dowall, John, & Sons, Johnstone.
 M'Kie & Baxter, Glasgow.

Driving Engines—

(See also High-Speed Engines, Locomotives, Marine Engines, Portable Engines, Rolling-Mill Engines, Traction Engines, Tramway Engines.)

Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Berry, John, Halifax.
 Bradley, R., & Co., Wakefield.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Browett, Lindley & Co., Ltd., Patrixcroft.
 Buckley & Taylor, Oldham.

Driving Engines—continued.

M'Laren, J. & H., Leeds.
 McNaught, John & William, Rochdale.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mann & Charlesworth, Leeds.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Mather, Alex., & Son, Edinburgh.
 Matthews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Owen, Brazil & Holborow, Bristol.
 Perkin & Co., Ltd., Leeds.
 Pope, W., & Son, Ltd., London.
 Pullan & Mann, Leeds.
 Rawlinsons, Ltd (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Riley, J. F., Huddersfield.
 Riley, J. H., & Co., Bury.
 Ross & Duncan, Glasgow.
 St. George's Ironworks, Ltd., Manchester.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Scott & Hodgson, Manchester.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Ramsbottom.
 Shaw, Mark, Huddersfield.
 Simpson, James, & Co., Ltd., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Summers & Scott, Gloucester.
 Taylor, Thomas, Leicester.
 Thomson, Son & Co., Dundee.
 Thwaites Brothers, Ltd., Bradford.
 Umpherston & Co., Ltd., Leith.
 Urnson & Thompson, Oldham.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Vauxhall Ironworks Co., Ltd., London.
 Wainwright, Thomas, & Sons, Stalybridge.

Driving Engines—continued.

Walker Brothers, Wigan.
 Walker, James, & Son, Edinburgh.
 Waller, George & Co., Stroud.
 Walmsley, Charles, & Co., Ltd., Bury.
 West End Engine Works Co., Edinburgh.
 Whitaker, C., & Co., Bradford.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Wood, John & Edward, Bolton.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Dry Dock Proprietors—

Brodie, John, & Co., Ltd., London.
 Brown's Dry Dock and Engineering Co., Ltd., London.
 Central Marine Engine Works, West Hartlepool.
 Deptford Dry Docks Co., Ltd., London.
 Fletcher, Son & Fearnall, Ltd., London.
 Glengall Iron Works, Ltd., London.
 Green, R. & H., Ltd., London.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Laird Brothers, Birkenhead.
 London Craving Dock Co., Ltd., London.
 Menzies & Co., Ltd., Leith.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Readhead, John, & Sons, South Shields.
 Rodger, A., & Co., Port-Glasgow.
 Scott & Co., Greenock.
 Stewart, John, & Sons, Ltd., London.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.

Drying Apparatus—

Blake, Barclay & Co., Greenock.
 Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Holden & Brooke, Ltd., Manchester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jefferson, Joseph, & Brothers, Bradford.
 McNaught, John & William, Rochdale.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Petrie, John, Jun., Ltd., Rochdale.
 Riley, J. H., & Co., Bury.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor, Wordsworth & Co., Leeds.
 Walker, Samuel, Manchester.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Duplex Pumps—

(See Pumps.)

Dyeing Machinery—

(See also Bleaching Machinery.)

Bentley & Jackson, Ltd., Bury.
 Berry, John, Halifax.
 Calvert & Co., Huddersfield.
 Crossley, John, & Co., Halifax.
 Downham, J., & Co., Bury.
 Dykes, G. & J., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brother, Bolton.
 Kenworthy, Royston & Co., Huddersfield.
 Kilburn, R., & Sons, Leeds.
 Riley, J. F., Huddersfield.
 Riley, J. H., & Co., Bury.
 Robinson, Joseph & Co., Manchester.
 Stead Brothers, Halifax.
 Strang, Joseph, Ltd., Ramsbottom.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Walker, Samuel, Manchester.
 Whiteley, William, & Sons, Ltd., Huddersfield.

DYNAMOS AND MOTORS—

Adamson, Joseph, & Co., Hyde.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Ashton, Frost & Co., Ltd., Blackburn.
 Bennis, Edward, & Co., Ltd., Bolton.
 Blackburn, Joseph, Nottingham.
 Broadbent, T. W., Huddersfield.
 Callender's Cable and Construction Co., Ltd., London.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 General Electric Co., Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Haswell, J. Stenson, & Co., Leicester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton, Keighley Electrical Engineering Co., Ltd., Keighley.
 Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Company, Ltd., Taunton.
 Parker, Thomas, Ltd., Wolverhampton.
 Parsons, C. A., & Co., Newcastle-on-Tyne.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rosling & Appleby, Bradford.
 Royce, F. H., & Co., Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Stephens, Smith & Co., Ltd., London.
 Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Sykes, Alfred, Huddersfield.

Economisers—Fuel—

Bennis, Edward, & Co., Ltd., Bolton.
 Doukin, Bryan, & Co., Ltd., London.
 Green, E., & Sons, Ltd., Wakefield.
 Meldrum Brothers, Manchester.

Ejectors—

Bailey, W. H., & Co., Ltd., Manchester.
 Fletcher Brothers, Ashton-under-Lyne.
 Gresham & Craven, Ltd., Manchester.
 Lancaster & Tonge, Ltd., Manchester.
 Ledward, T., & Co., London and Manchester.
 Madan, Charles S., & Co., Manchester.
 Wilkinson, Wm., & Co., Ltd., Wigan.

Electrical Engineers and Contractors—

Adamson, Daniel, & Co., Dukinfield.
 Adamson, Joseph, & Co., Hyde.
 Allen, W. H., Sons, & Co., Bedford.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Ashton, Frost & Co., Ltd., Blackburn.
 Ashwell & Nesbit, Ltd., London.
 Bennis, Edward, & Co., Ltd., Bolton.
 Blackburn, Joseph, Nottingham.
 Broadbent, T. W., Huddersfield.
 Callender's Cable and Construction Co., Ltd., London.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clarke, T. A. W., Leicester.
 Clift, E. H., London.
 Crompton & Co., Ltd., London and Chelmsford.
 Davy Brothers, Ltd., Sheffield.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 General Electric Co., Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Gwynne & Co., London.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Haswell, J. Stenson, & Co., Leicester.
 Henley's, W. T., Telegraph Works Co., Ltd., London.

**Electrical Engineers and Contractors
—continued.**

Hodges & Todd, London.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Keighley Electrical Engineering Co., Ltd., Keighley.
 Mavor & Coulson, Ltd., Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Newton's Electrical Co., Ltd., Taunton Oldham, Alex., & Sons, Dukinfield.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Parker, Thomas, Ltd., Wolverhampton.
 Parsons, C. A., & Co., Newcastle-on-Tyne.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Phosphor Bronze Co., Ltd., London.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rosling & Appleby, Bradford.
 Royce, F. H., & Co., Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Sykes, Alfred, Huddersfield.
 Tate, James, Bradford.
 Thwaites Brothers, Ltd., Bradford.

Electric Batteries—

Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Electric Bells and Signals—

Blackburn, Joseph, Nottingham.
 Broadbent, T. W., Huddersfield.
 Charlesworth, S., & Co., Oldham.
 General Electric Co., Ltd., Manchester.
 Haswell, J. Stenson, & Co., Leicester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Jackson, P. R., & Co., Ltd., Manchester.
 Mechan & Sons, Glasgow.
 Siemens Brothers & Co., Ltd., London.
 Sykes, Alfred, Huddersfield.
 Tate, James, Bradford.

Electric Cables and Wiring—

(See **Cables—Electric Lighting, Telegraph, Telephone.**)

Electric Cranes—

Adamson, Joseph, & Co., Hyde.
 Ashton, Frost & Co., Ltd., Blackburn.
 Berry, Henry, & Co., Leeds.
 Booth, Joseph, & Brothers, Leeds.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Carrick & Ritchie, Edinburgh.
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bennett & Co., Ltd., London.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craven Brothers, Ltd., Manchester.
 Crompton & Co., Ltd., London and Chelmsford.
 Dougill, Alf., & Co., Ltd., Leeds.
 Edmondson, John A., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Grieve, John, & Co., Motherwell.
 Hall, J. P., & Co., Oldham.
 Henderson, John M., Aberdeen.
 Higginbottom & Mannock, Manchester.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson & Phillips, Old Charlton
 Leeds Engineering and Hydraulic Co., Leeds.
 Marshall, Fleming & Jack, Motherwell.
 Mavor & Coulson, Ltd., Glasgow.
 Parker, Thomas, Ltd., Wolverhampton.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Royce, F. H., & Co., Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Stephens, Smith & Co., Ltd., London.
 Stothert & Pitt, Ltd., Bath.
 Tate, James, Bradford.
 Vaughan & Son, Manchester.
 Whitaker, C., & Co., Bradford.

Electric Drillers—For Metal and Stone—

Holmes, J. H., & Co., Newcastle-on-Tyne.
 Mavor & Coulson, Ltd., Glasgow.
 Muir, Wm., & Co., Ltd., Manchester.
 Parker, Thomas, Ltd., Wolverhampton.
 Rosling & Appleby, Bradford.
 Siemens Brothers & Co., Ltd., London.

Electric Dynamos—

(See **DYNAMOS AND MOTORS.**)

Electric Heating Appliances—

Crompton & Co., Ltd., London and Chelmsford.
 General Electric Co., Ltd., Manchester.

Electric Hoists—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Barker, John, & Sons, Ltd., Oldham.
 Clark, Bennett & Co., Ltd., London.
 Crompton & Co., Ltd., London and Chelmsford.
 Dougill, Alf., & Co., Leeds.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Hall, J. P., & Co., Ltd., Oldham.
 Hartnell, Wilson, Leeds.
 Higginbottom & Mannock, Manchester.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Mavor & Coulson, Ltd., Glasgow.
 Middleton, Robert, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Richmond, Joseph, & Co., Ltd., London.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.

Electric Light Plant and Fittings*(See also Dynamos.)*

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Ashton, Frost & Co., Ltd., Blackburn.
 Bennis, Edward, & Co., Ltd., Bolton.
 Broadbent, T. W., Huddersfield.
 Burnet, Lindsay, & Co., Glasgow.
 Callender's Cable and Construction Co., Ltd., London.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clarke, T. A. W., Leicester.
 Crompton & Co., Ltd., London and Chelmsford.
 Davy Brothers, Ltd., Sheffield.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Edmondson, John A., Leeds.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Frost & Sons, London.
 Galloways, Ltd., Manchester.
 General Electric Co., Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Haswell, J. Stenson, & Co., Leicester.
 Henley's, W. T., Telegraph Works Co., Ltd., London.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hodges & Todd, London.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Keighley Electrical Engineering Co., Ltd., Keighley.
 M'Laren, J. & H., Leeds.
 Mavor & Coulson, Ltd., Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave, John, & Son, Ltd., Bolton.
 Newton's Electrical Co., Ltd., Taunton.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Parker, Thomas, Ltd., Wolverhampton.
 Parsons, C. A., & Co., Newcastle-on-Tyne.

Electric Light Plant and Fittings—cont.

Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rosling & Appleby, Bradford.
 Royce, F. H., & Co., Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Sykes, Alfred, Huddersfield.
 Thornycroft, John I., & Co., London.
 Thwaites Brothers, Ltd., Bradford.

Electric Measuring Instruments

Crompton & Co., Ltd., London and Chelmsford.
 General Electric Co., Ltd., Manchester.
 Hodges & Todd, London.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Electric Meters—

Ferranti, S. Z. De, Ltd., Hollinwood.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Electric Motors—*(See Dynamos and Motors.)***Electric Plating and Depositing Plant—**

Crompton & Co., Ltd., London and Chelmsford.
 Hall, J. P., & Co., Oldham.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Mavor & Coulson, Ltd., Glasgow.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.

Electric Pumping Machinery—

Ashton, Frost & Co., Ltd., Blackburn.
 Bailey, W. H., & Co., Ltd., Manchester.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London and Chelmsford.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Evans, Joseph, & Sons, Wolverhampton.
 Greenwood & Batley, Ltd., Leeds.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson & Phillips, Old Charlton.
 Leeds Engineering and Hydraulic Co., Leeds.
 Mavor & Coulson, Ltd., Glasgow.
 Parker, Thomas, Ltd., Wolverhampton.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Rosling & Appleby, Bradford.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Stead Brothers, Halifax.
 Tidwalties Brothers, Ltd., Bradford.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Electric Search-Lights—

(See Search-Light Projectors.)

Electric Switch - Boards and Switches—

Crompton & Co., Ltd., London and Chelmsford.
 Edmondson, John A., Leeds.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Hartnell, Wilson, Leeds.

**Electric Switch-Boards and Switches—
continued.**

Hodges & Todd, London.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Co., Ltd., Taunton.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Siemens Brothers & Co., Ltd., London.

Electric Traction Plant—

Crompton & Co., Ltd., London and Chelmsford.
 Davy Brothers, Ltd., Sheffield.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hall, J. P., & Co., Oldham.
 Henley's, W. T., Telegraph Works Co., Ltd., London.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Johnson & Phillips, Old Charlton.
 M'Laren, J. & H., Leeds.
 Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Co., Ltd., Taunton.
 Parker, Thomas, Ltd., Wolverhampton.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Stead Brothers, Halifax.
 Stephens, Smith & Co., Ltd., London.

Electric Transformers—

Crompton & Co., Ltd., London and Chelmsford.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Johnson & Phillips, Old Charlton.

Electric Transformers—continued.

Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Co., Ltd., Taunton.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.

Electric Winches and Windlasses—

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London and Chelmsford.
 Easton, Anderson & Goolden, Ltd., Erith.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Mavor & Coulson, Ltd., Glasgow.
 Parker, Thomas, Ltd., Wolverhampton.
 Rosling & Appleby, Bradford.
 Siemens Brothers & Co., Ltd., London.

Elevators and Conveyors—for Coal, Grain, Ore, etc.—

(See also Conveyors and Elevators; Coal Hoists, Grain Hoists and Hoisting Machinery.)

Elevators—Passenger—

(See also Electric Hoists, Hydraulic Hoists and Hoisting Machinery.)

Arrol, Sir William, & Co., Ltd., Glasgow.
 Clark, Bennett & Co., Ltd., London.
 Easton, Anderson & Goolden, Ltd., Erith.
 Greenwood & Batley, Ltd., Leeds.
 Middleton, Robert, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Turner & Co., Ltd., London.
 Wren, Henry, & Co., Manchester.

Emery, Emery Wheels, etc.—

Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Rochdale.
 Luke & Spencer, Ltd., Manchester.

Emery Grinding Machinery—

Birch, G., & Co., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dronfield Brothers, Ltd., Oldham.
 Glover, M., & Co., Leeds.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Luke & Spencer, Ltd., Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Urmson & Thompson, Oldham.
 Winder Brothers, Ltd., Sheffield.

Engine and Boiler Fittings—

(See also Indicators, Governors, Lubricators, Valves, Cocks, etc.)

Adams, Thomas, Manchester.
 Adamson, Daniel, & Co., Dukinfield.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Bigwood, J., & Son, Wolverhampton.
 Billington & Newton, Longport.
 Carmichael, James, & Co., Ltd., Dundee.
 Carter, James, & Sons, Stalybridge.
 Cockburn, David, Glasgow.
 Cockburn, George, & Co., Glasgow.
 Cran, John, & Co., Leith.
 Dewart & Co., London.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eastwood, Walter, Ashton-under-Lyne.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Foster, Joseph, & Sons, Preston.
 Frost & Sons, London.
 Galloway, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Gresham & Craven, Ltd., Manchester.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Kincaid, John G., & Co., Greenock.

Engine and Boiler Fittings—continued.

Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Madan, Charles S., & Co., Manchester.
 Marchant, G. M., Huddersfield.
 Marsden, Ellis, Liverpool.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Mechan & Sons, Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pease, Rhodes & Co., Ltd., Bradford.
 Saxon, George, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Stevenson & Co., Ltd., Preston.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor, Robert, & Sons, Huddersfield.
 Thornycroft, John I., & Co., London.
 Turnbull, Alexander, & Co., Glasgow.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yates & Thom, Blackburn.

Engineers' Machine Tools—

(See **Machine Tools.**)

Engines—

(See **Air-Compressing Engines, Blowing Engines, High-Speed Engines, Driving Engines, Haulage Machinery, Locomotives, Marine Engines, Portable Engines, Pumping Engines, Rolling Mill Engines, Traction Engines, Tramway Engines, Winding Engines.**)

Evaporators—

Blake, Barclay & Co., Greenock.
 Burnet, Lindsay, & Co., Glasgow.
 Caird & Rayner, London.
 Central Marine Engine Works, West Hartlepool.
 Clarke, George, Ltd., Sunderland.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Kirkaldy, John, Ltd., London.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Normandy's Patent Marine Aerated Fresh Water Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Redpath & Paris, London.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Stevenson & Co., Ltd., Preston.
 Wailes, George, & Co., London.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Weir, G. & J., Ltd., Glasgow.

Excavators—Steam—

Chaplin, Alex., & Co., Glasgow.
 Hunter & English, London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Rose, Downs & Thompson, Ltd., Hull.
 Stewart, John, & Son, Ltd., London.

Exhausters—

(See **Blowers and Exhausters.**)

Expansion Rings—

Bolton Iron and Steel Co., Ltd., Bolton.

Explosives—Machinery for Making—

Aitchison & Co., Edinburgh.
 Daglish, Robert, & Co., St. Helens.
 Easton, Anderson & Goolden, Ltd., Erith.
 Greenwood & Batley, Ltd., Leeds.
 Hall, J. & E., Ltd., Dartford.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kincaid, John G., & Co., Greenock.
 Stevenson & Co., Ltd., Preston.
 Tatham, William, & Co., Rochdale.
 Tomlinson, James (Rochdale), Ltd., Rochdale.
 Umpherston & Co., Ltd., Leith.

Extractors—

(See **Hydro Extractors, Oil Extractors.**)

Fans and Blowers—

Allen, W. H., Sons & Co., Bedford.
 Alley & Maclellan, Glasgow.
 Appleyard, Joseph, Bradford.
 Bailey & Garnett, Ltd., Stalybridge.
 Bradley, R., & Co., Wakefield.
 Brierley, Thomas, & Co., Oldham.
 Bumsted & Chandler, Huddersfield.
 Campbell & Calderwood, Paisley.
 Crompton & Co., Ltd., London and Chelmsford.
 Daglish, Robert, & Co., St. Helens.
 Davis & Co., Ltd., London.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Entwistle & Gass, Ltd., Bolton.
 Goodwin, Arnold, & Son, London.
 Greenock Foundry Co., Greenock.
 Günther, W., & Sons, Oldham.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Howden, James, & Co., Glasgow.
 Larmuth, Thomas, & Co., Manchester.
 M'Kie & Baxter, Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 Marsden, John, & Son, Liverpool.
 Meldrum Brothers, Manchester.
 Redpath & Paris, London.
 Siemens Brothers & Co., Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Thwaites Brothers, Ltd., Bradford.
 Walker Brothers, Wigan.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Worsley Mesnes Iron Works Co., Wigan.

Feed-Check Valves—

Adams, Thomas, Manchester.
 Adamson, Daniel, & Co., Dukinfield.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Carruthers, J. H., & Co., Glasgow.
 Carter, James, & Sons, Stalybridge.
 Cockburn, David, Glasgow.
 Dewart & Co., London.
 Easton, Anderson & Goolden, Ltd., Erith.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Galloways, Ltd., Manchester.
 Hall, John, & Son, Oldham.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Oldham Boiler Works Co., Ltd., Oldham.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Schofield & Taylor, Huddersfield.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Thornycroft, John I., & Co., London.
 Turnbull, Alexander, & Co., Glasgow.
 Weir, G. & J., Ltd., Glasgow.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Feed-Water Filters—

Alley & Maclellan, Glasgow.
 Ashton, Frost & Co., Ltd., Blackburn.
 Blake, Barclay & Co., Greenock.
 Caird & Rayner, London.
 Carruthers, J. H., & Co., Glasgow.
 Kincaid, John G., & Co., Greenock.
 Kirkaldy, John, Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Pulsometer Engineering Co., Ltd., London.
 Turnbull, Alexander, & Co., Glasgow.
 Watson, Henry, & Sons, Newcastle-on-Tyne.

Feed-Water Heaters—

Ashton, Frost & Co., Ltd., Blackburn.
 Ashwell & Nesbit, Ltd., London and Leicester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Burnet, Lindsay, & Co., Glasgow.
 Caird & Rayner, London.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Cole, T. & W., London.
 Crook, Thomas T., Bolton.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Sons, Arbroath.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Haigh, W. B., & Co., Oldham.
 Hanna, Donald & Wilson, Paisley.
 Kincaid, John G., & Co., Greenock.
 Kirkaldy, John, Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Normandy's Patent Marine Aerated Fresh Water Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Owen, Brazil & Holborow, Bristol.
 Pearn, Frank, & Co., Ltd., Manchester.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Schofield & Taylor, Huddersfield.
 Storey, Isaac, & Sons, Manchester.
 Thornton & Crebbin, Bradford.
 Turnbull, Alexander, & Co., Glasgow.
 Wailes, George, & Co., London.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Weir, G. & J., Ltd., Glasgow.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Feed-Water Pumps—*(See Pumps.)***Feed-Water Regulators—***(See Feed Check Valves.)***Felt Machinery—**

Bywater, William, Leeds.
 Ritchie, Hart & Co., Ltd., Belfast.
 Taylor, Wordsworth & Co., Leeds.

Fencing and Railings—Iron—

Bailey & Garnett, Ltd., Stalybridge.
 Crumblehulme, W., & Sons, Ltd., Bolton.
 Tonkinson, Henry, & Sons, Sunderland.

File Cutting and Grinding Machinery—

Foster, Joseph, & Sons, Preston.
 Greenwood & Batley, Ltd., Leeds.
 Oxley Brothers, Ltd., Sheffield.

File Makers—

Allen, Edgar, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Osborn, Samuel, & Co., Sheffield.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Turton, George, Platts & Co., Sheffield.

Filtering Apparatus—

Alley & Maclellan, Glasgow.
 Ashton, Frost & Co., Ltd., London.
 Blake, Barclay & Co., Greenock.
 Caird & Rayner, London.
 Carruthers, J. H., & Co., Glasgow.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Greenock Foundry Co., Greenock.
 Haigh, W. B., & Co., Oldham.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Kerr, Stuart & Co. Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Kirkaldy, John, Ltd., London.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Masson, Scott & Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Pulsometer Engineering Co., Ltd., London.
 Rose, Downs & Thompson, Ltd., Hull.

Filtering Apparatus—continued.

Strang, Joseph, Ltd., Ramsbottom.
 Thwaites Brothers, Ltd., Bradford.
 Turnbull, Alexander, & Co., Glasgow.
 Watson, Henry, & Sons, Newcastle-on-Tyne.

Filter Presses—

Ashton, Frost & Co., Ltd., Blackburn.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Greenwood & Batley, Ltd., Leeds.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Rose, Downs & Thompson, Ltd., Hull.
 Strang, Joseph, Ltd., Ramsbottom.

Filters—

(See *Filtering Apparatus, Feed-Water Filters, Oil Filters.*)

Fire Bars—

Adamson, Daniel, & Co., Dukinfield.
 Aitchison & Co., Edinburgh.
 Bennis, Edward, & Co., Ltd., Bolton.
 Black, William, South Shields.
 Brightside Foundry Co., Ltd., Sheffield.
 Burnet, Lindsay, & Co., Glasgow.
 Carter, James, & Sons, Stalybridge.
 Central Marine Engine Works, West Hartlepool.
 Cran, John, & Co., Leith.
 Death & Harris, Leicester.
 Douglas Forge Co., Ltd., Wigan.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Edie, Henry, & Co., London.
 Fraser, Douglas, & Sons, Arbroath.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.

Fire Bars—continued.

Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Ginman & Son, Plumstead.
 Haigh, W. B., & Co., Oldham.
 Hall, John, & Son, Oldham.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Ltd., Leith.
 Heald, John, Chorley.
 Henderson, D. & W., & Co., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Meldrum Brothers, Manchester.
 Musgrave, John, & Son, Ltd., Bolton.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Oldham Boiler Works Co., Ltd., Oldham.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Richardson, Tuer & Co., Manchester.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Strang, Joseph, Ltd., Ramsbottom.
 White, W. B., Colne.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yates & Thom, Blackburn.

Fire - Extinguishing Appliances—

Beck & Co., Ltd., London.
 Blundell's London Copper and Brass Works, Ltd., London.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Lambeth Brass and Iron Co., Ltd., London.
 Stone, J., & Co., London.
 Walker, Samuel, Manchester.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Firewood-Making Machinery—

Glover, M., & Co., Leeds.

Flanged Plates for Boilers, Locomotives, etc.—

Adamson, Daniel, & Co., Dukinfield.
 Adamson, Joseph, & Co., Hyde.
 Beeley, Thomas, Hyde.
 Brown, John, & Co., Ltd., Sheffield.
 Burnet, Lindsay, & Co., Glasgow.
 Davy Brothers, Ltd., Sheffield.
 Galloways, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 McLaren, J. & H., Leeds.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.

Flanging Machines—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Bennie, James, & Sons, Glasgow.
 Berry, Henry, & Co., Leeds.
 Craig & Donald, Johnstone.
 Crow, Harvey & Co., Glasgow.
 Fielding & Platt, Ltd., Gloucester.
 Hetherington, John, & Sons, Ltd., Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Scriven & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.

Flannelette - Finishing Machinery—

Bentley & Jackson, Ltd., Bury.
 Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Jackson & Brother, Bolton.
 Kenworthy, Royston & Co., Huddersfield.
 Riley, J. H., & Co., Bury.
 Walker, Samuel, Manchester.

Flax, Hemp and Jute Machinery—

Combe, Barbour & Combe, Ltd., Belfast.
 Cotton, Stephen, & Co., Belfast.
 Craig, A. F., & Co., Ltd., Paisley.
 Curtis, Sons & Co., Manchester.

Flax, Hemp and Jute Machinery— *continued.*

Fairbairn, Naylor, Macpherson & Co., Ltd., Leeds.
 Fraser, Douglas, & Sons, Arbroath.
 Hacking & Co., Bury.
 Harding, Richardson, Rhodes & Co., Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Horner, George, Belfast.
 Houston & Hamilton, Belfast.
 Lawson, Samuel, & Sons, Leeds.
 Lee, Croll & Co., Lochee.
 Low, James F., & Co., Monifieth.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Parker, Charles, Sons & Co., Dundee.
 Robertson & Orchar, Ltd., Dundee.
 Taylor, Wordsworth & Co., Leeds.
 Thomson, Son & Co., Dundee.
 Urquhart, Lindsay & Co., Dundee.

Floor-Cloth Machinery—

(See Linoleum Machinery, also Floor Cloths, under Printing Machinery.)

Flour-Mill Machinery—

Foster, Joseph, & Sons, Preston.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Hind & Lund, Ltd., Preston.
 Mather, Alex., & Son, Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Tomlinson, James (Rochdale), Ltd., Rochdale.

Fly Wheels—

(See Mill Gearing, Shafting and Shaft Fittings.)

Folding or Plaiting Machinery—

Butterworth & Dickinson, Burnley.
 Foster, Joseph, & Sons, Preston.
 Hacking & Co., Bury.
 Hattersley, George, & Sons, Ltd., Keighley.
 Riley, J. H., & Co., Bury.
 White, W. B., Colne.

Forced and Induced Draught Apparatus—

Alley & Maclellan, Glasgow.
 Bennis, Edward, & Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Bumsted & Chandler, Huddersfield.
 Burnet, Lindsay, & Co., Glasgow.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Eltringham, J. T., & Co., South Shields.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser, John, & Son, London.
 Galloways, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Gwynne & Co., London.
 Haigh, W. B., & Co., Oldham.
 Hanna, Donald & Wilson, Paisley.
 Howden, James, & Co., Glasgow.
 Kincaid, John G., & Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 Ledward, T., & Co., London and Manchester.
 M'Kie & Baxter, Glasgow.
 Meldrum Brothers, Manchester.
 Redpath & Paris, London.
 Thwaites Brothers, Ltd., Bradford.
 Watson, Henry, & Sons, Newcastle-on-Tyne.

Forges—Portable—

(See Hearths—Portable.)

Forging Presses and Plant—

(See also Hammers—Steam.)

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Craven Brothers, Ltd., Manchester.
 Davis & Primrose, Leith.
 Davy Brothers, Ltd., Sheffield.
 Fielding & Platt, Ltd., Gloucester.
 Galloways, Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Middleton, Robert, Leeds.
 Rice & Co., Leeds.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Saxon, George, Manchester.
 Smith, Daniel, & Co., Wolverhampton.
 Smith, Hugh, & Co., Glasgow.
 Thwaites Brothers, Ltd., Bradford.

Forgings—Iron and Steel—

(See also Anchors, Shafting—Marine, Crank Shafts.)

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown Brothers & Co., Ltd., Edinburgh.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Darlington Forge Co., Ltd., Darlington.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Emerson, Walker & Thompson Brothers, Ltd., Gateshead-on-Tyne.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Greenock Foundry Co., Greenock.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorn & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Ince Forge Co., Wigan.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Kirkstall Forge Co., Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Reay & Usher, Sunderland.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rogerson, John, & Co., Ltd., Walsingham.
 Schofield & Taylor, Huddersfield.
 Spencer, John, & Sons, Ltd., castle-on-Tyne.
 Strang, Joseph, Ltd., Rams

Forgings—Iron and Steel—*continued.*

Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Vickers, Sons & Maxim, Ltd., Sheffield and Barrow-in-Furness.
 Walker Brothers, Wigan.
 White, W. B., Colne.
 Woodhouse & Rixson, Sheffield.

Founders—

(See **Aluminium Founders, Brass and Bronze Founders, Iron and Steel Founders.**)

Foundry Plant and Appliances—

(See **Cupolas, Cranes, Crucibles, Sand-Moulding Machines, Wheel-Moulding Machines.**)

Friction Clutches—

Blackburn, George, & Sons, Ltd., Nottingham.
 Bradley, R., & Co., Wakefield.
 Daglish, Robert, & Co., St. Helens.
 Dryden, Thomas, Preston.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser & Chalmers, Ltd., London.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Harpers, Ltd., Aberdeen.
 Jackson & Brother, Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Moore & Korte, Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nottingham Engineering Co., Ltd., Nottingham.
 Pope, W., & Son, Ltd., London.
 Qualter, Hall & Co., Barnsley.
 Riley, J. H., & Co., Bury.
 Stead Brothers, Halifax.
 Strang, Joseph, Ltd., Ramsbottom.
 Unbreakable Pulley and Mill-gearing Co., Ltd., Manchester.
 Walker Brothers, Wigan.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Whitaker, C., & Co., Bradford.
 Wood & Gee, Wigan.
 Wood, John & Edward, Bolton.

Furnace Blowing Engines and Plant—

(See **Blowing Engines and Plant.**)

Furnaces—Boiler—

(See **Boiler Furnaces.**)

Furnaces—Smelting, Annealing, Case-hardening, etc.—

Fletcher Brothers, Ashton-under-Lyne.
 Fraser & Chalmers, Ltd., London.
 Hamer, S. H., Halifax.
 Holroyd, John, & Co., Ltd., Rochdale.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Oxley Brothers, Ltd., Sheffield.
 Thwaites Brothers, Ltd., Bradford.

Galvanising Plant—

Bigwood, J., & Sons, Wolverhampton.
 Bridges, Thomas, & Sons, Wolverhampton.

Gas Compressors—

(See **Air-Compressors.**)

Gas Cylinders—

(See **Cylinders for Gas and Air.**)

Gas Engines—

Andrew, J. E. H., & Co., Ltd., Reddish.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clarke, T. A. W., Leicester.
 Cole, T. & W., London.
 Dewhurst, C. H., Keighley.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dykes, G. & J., Bury.
 Fielding & Platt, Ltd., Gloucester.
 Furnival & Co., Manchester.
 Green, Thomas, & Son, Ltd., Leeds.
 Hanna, Donald & Wilson, Paisley.
 Hill, F. J., Leicester.

Gas Engines—continued.

Keighley Engineering Co., Keighley.
 National Gas Engine Co., Ltd., Ashton-under-Lyne.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Perkin & Co., Ltd., Leeds.
 Sptech & Thomas, Bradford.
 Unbreakable Pulley and Mill-gearing Co., Ltd., Manchester.

Gas Exhausters—

(See **Blowers and Exhausters.**)

Gas Holders—

(See **Gas Works Plant.**)

Gas Meters—

Milne, James, & Son, Ltd., Edinburgh.

Gas Pipes—

(See **Pipes.**)

Gas Producers—

Calvert & Co., Huddersfield.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Mechan & Sons, Glasgow.
 Meldrum Brothers, Manchester.
 Pope, W., & Son, Ltd., London.
 Stevenson & Co., Ltd., Preston.
 West's Gas Improvement Co., Ltd., Manchester.

Gas Works Plant—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.

Gas Works Plant—continued.

Clayton, Son & Co., Ltd., Leeds.
 Craig, A. F., & Co., Ltd., Paisley.
 Donkin, Bryan, & Co., Ltd., London.
 Douglas Forge Co., Ltd., Wigan.
 Goodwin, Arnold, & Son, London.
 Gwynne & Co., London.
 Hall, John, & Son, Oldham.
 Hanna, Donald & Wilson, Paisley.
 Harrison & Hammond, Wakefield.
 Hunter & English, London.
 M'Kinnon, William, & Co., Aberdeen.
 Mechan & Sons, Glasgow.
 Meldrum Brothers, Manchester.
 Milne, James, & Son, Ltd., Edinburgh.
 Pope, W., & Son, Ltd., London.
 Stevenson & Co., Ltd., Preston.
 Wailes, George, & Co., London.
 Waller, George, & Co., Stroud.
 West's Gas Improvement Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Gauge Cocks—

(See **Valves and Cocks.**)

Gauges—Pressure—

Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Carter, James, & Son, Stalybridge.
 Degrave & Co., London.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Storey, Isaac, & Sons, Manchester.

Gauges—Water—

Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Carter, James, & Sons, Stalybridge.
 Dewrance & Co., London.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Moorhouse, Sydney & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Storey, Isaac, & Sons, Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Gear Cutting Machines—

(See **Wheel-Cutting Machines.**)

Gearing—Mill—

(See **Mill Gearing and Shafting.**)

Gear Wheels—

(See **Mill Gearing, Shafting and Shaft Fittings.**)

Girders—Built and Rolled—

(See **Bridges, Roofs, and Structural Iron and Steel Work.**)

Glass-Working Plant—

Daglish, Robert, & Co., St. Helens.
 Entwistle & Gass, Ltd., Bolton.
 Greenwood & Batley, Ltd., Leeds.
 Stevenson & Co. Ltd., Preston.

Gold Crushing and Amalgamating Machinery—

Brightside Foundry Co., Ltd., Sheffield.
 Daglish, Robert, & Co., St. Helens.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser & Chalmers, Ltd., London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.

Goliath and Titan Cranes—

Carrick & Ritchie, Edinburgh.
 Chaplin, Alex., & Co., Glasgow.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Booth, Joseph, & Brothers, Leeds.
 Henderson, John M., Aberdeen.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Smith, Thomas, Leeds.
 Stothert & Pitt, Ltd., Bath.

Governors—Stationary Engine—

Arundel & Co., Stockport.
 Ashton, Frost & Co., Ltd., Blackburn.
 Browett, Lindley & Co. Ltd., Patricroft.
 Carmichael, James, & Co., Ltd., Dundee.
 Evans, Joseph, & Sons, Wolverhampton.
 Galloways, Ltd., Manchester.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 M'Laren, J. & H., Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 St. George's Ironworks, Ltd., Manchester.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ransbottom.
 Storey, Isaac, & Sons, Manchester.
 Whitley Partners, Leeds.
 Wood, John & Edward, Bolton.

Governors—Marine Engine—**Grabs—***(See Dredgers and Dredge Plant.)***Grain Hoists—**

Bennis, Edward & Co., Ltd., Bolton.
 Fraser & Chalmers, Ltd., London.
 Haigh, W. B., & Co., Oldham.
 Hind & Lund, Ltd., Preston.
 Milne, James, & Son, Ltd., Edinburgh.
 Rose, Downs & Thompson, Ltd., Hull.
 Stevenson & Co., Ltd., Preston.

Granite-Working Machinery—*(See Stone-Working Machinery.)***Graving Dock Proprietors—***(See Dry-Dock Proprietors.)***Grinding Mills—**

Barry, Henry, & Co., Ltd., Aberdeen.
 Berry, John, Halifax.
 Charlesworth, S., & Co., Oldham.
 Clayton, Howlett & Co., London.
 Crook, Thomas T., Bolton.
 Daglish, Robert, & Co., St. Helens.
 Douglas Forge Co., Ltd., Wigan.
 Fraser & Chalmers, Ltd., London.
 Good & Menzies, Ltd., Hull.
 Henderson, John M., Aberdeen.
 Hind & Lund, Ltd., Preston.
 Johnson, William, & Sons, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Mann, G., & Co., Leeds.
 Middleton, Robert, Leeds.
 Oxley Brothers, Ltd., Sheffield.
 Pullan & Mann, Leeds.
 St. George's Ironworks, Ltd., Manchester.
 Shepherd, Hill & Co., Ltd., Leeds.
 Stevenson & Co., Ltd., Preston.

Grinding and Polishing Machinery—*(See also Emery-Grinding Machinery.)*

Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Crookes, Roberts & Co., Sheffield.
 Darling & Sellers, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Dronsfield Brothers, Ltd., Oldham.
 Glover, M., & Co., Leeds.
 Henderson, John M., Aberdeen.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Luke & Spencer, Ltd., Manchester.
 Oxley Brothers, Ltd., Sheffield.
 Urmson & Thompson, Oldham.
 White, W. B., Colne.
 Winder Brothers, Ltd., Sheffield.

Guillotines— for Paper Cutting—*(See Bookbinders' Machinery.)***Gun-Making Machinery—***(See Ordnance Machinery and Small Arms Machinery.)***Gunpowder, etc., Machinery—***(See Explosives—Machinery for Making.)***Guns, Gun Carriages and Mountings—***(See Ordnance—Makers of.)***Guttapercha Machinery—***(See Rubber Mill Machinery.)*

Hammers—Steam and Pneumatic—

Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Brightside Foundry Co., Ltd., Sheffield.
 Clarke, T. A. W., Leicester.
 Crow, Harvey & Co., Glasgow.
 Davis & Primrose, Leith.
 Davy Brothers, Ltd., Sheffield.
 Dickinson, John, & Co., Keighley.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Greenwood & Batley, Ltd., Leeds.
 Hanna, Donald & Wilson, Paisley.
 Hulse & Co., Ltd., Manchester.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Pratt F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Ross, R. G., & Son, Glasgow.
 Scriven & Co., Leeds.
 Smith, Daniel, & Co., Wolverhampton.
 Thwaites Brothers, Ltd., Manchester.
 Urmsom & Thompson, Oldham.
 Walker Brothers, Wigan.
 Worsley Mesnes Iron Works Co., Wigan.

Haulage Machinery and Appliances—

Ashton, Frost & Co., Ltd., Blackburn.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Booth, Joseph, & Brothers, Leeds.
 Bradley, R., & Co., Wakefield.
 Chaplin, Alex., & Co., Glasgow.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Douglas Forge Co., Ltd., Wigan.
 Fleming & Ferguson, Ltd., Paisley.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Heald, John, Chorley.
 Henderson, John M., Aberdeen.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kenworthy, Taylor & Co., Barnsley.
 Lancaster & Tonge, Ltd., Manchester.

**Haulage Machinery and Appliances—
continued.**

Leeds Engineering and Hydraulic Co., Leeds.
 Needham Brothers & Brown, Barnsley.
 Qualter, Hall & Co., Barnsley.
 Stead Brothers, Halifax.
 Walker Brothers, Wigan.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Worsley Mesnes Ironworks Co., Wigan.
 Yates & Thom, Blackburn.

Hearths—Portable—

(See also Smiths' Hearths.)

Fraser, Douglas, & Sons, Arbroath.
 Oxley Brothers, Ltd., Sheffield.
 Thwaites Brothers, Ltd., Bradford.

Heating and Ventilating Apparatus—

Ashwell & Nesbit, Ltd., London and Leicester.
 Calvert & Co., Huddersfield.
 Crumblehulme, W., & Sons, Ltd., Bolton.
 Dougill, Alf., & Co., Ltd., Leeds.
 Ellis, J. C. & J. S., Ltd., Sheffield.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hayward Brothers & Eckstein, Ltd., London.
 Ledward, T., & Co., Manchester.
 Marsden, John, & Son, Liverpool.
 Newsom, Roberts & Co., Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Pease, Rhodes & Co., Ltd., Bradford.
 Simpson, James, & Co., Ltd., London.
 Turner & Co., London.
 Utley, Thomas, & Co., Liverpool.

Hemp Machinery—

(See Flax, Hemp and Jute Machinery.)

High-Speed Engines—

Adamson, Daniel, & Co., Dukinfield.
 Alley & Maclellan, Glasgow.
 Ashton, Frost & Co., Ltd., Blackburn.
 Browett, Lindley & Co., Ltd., Patri-
 croft.
 Bumsted & Chandler, Huddersford.
 Carmichael, James, & Co., Ltd.,
 Dundee.
 Carrick & Wardale, Gateshead-on-
 Tyne.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gates-
 head-on-Tyne.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Coulthard, T., & Co., Preston.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Fawcett, Preston & Co., Ltd., Liver-
 pool
 Fraser, Douglas, & Sons, Arbroath.
 Galloways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Gwynne & Co., London.
 Hall, J. P., & Co., Oldham.
 Howden, James, & Co., Glasgow.
 Lancaster & Tonge, Ltd., Manchester.
 M' Laren, J. & H., Leeds.
 Marshall, Sons & Co., Ltd., Gains-
 borough.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave, John, & Son, Ltd., Bolton.
 Owen, Brazil & Holborow, Bristol.
 Redpath & Paris, London.
 Riley, J. F., Huddersfield.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott, Ernest, & Mountain, Ltd.,
 Newcastle-on-Tyne.
 Scott & Hodgson, Manchester.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Rams-
 bottom.
 Smith, A. & D., & Co., London.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Storey, Isaac, & Sons, Manchester.
 Thwaites Brothers, Ltd., Bradford.
 Vauxhall Ironworks Co., Ltd., Lon-
 don.
 Wailes, George, & Co., London.
 Walmsley, Charles, & Co., Ltd., Bury.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.

Hoisting Machinery—

(See also **Ash Hoists, Coal Hoists,**
Electric Hoists, Grain Hoists,
Hydraulic Hoists, Elevators, Con-
veyors.)

Alley & Maclellan, Glasgow.
 Armstrong, Sir W. G., Whitworth &
 Co., Ltd., Newcastle-on-Tyne.
 Arrol, Sir William, & Co., Ltd.,
 Glasgow.
 Ashwell & Nesbit, Ltd., London and
 Leicester.
 Barker, John, & Sons, Ltd., Oldham.
 Benham & Sons, Ltd., London.
 Bennis, Edward, & Co., Ltd., Bolton.
 Berry, Henry, & Co., Leeds.
 Berry, John, Halifax.
 Bigwood, J., & Son, Wolverhampton.
 Blake, Barclay & Co., Greenock.
 Booth, Joseph, & Brothers, Leeds.
 Brown Brothers & Co., Ltd., Edin-
 burgh.
 Calvert & Co., Huddersfield.
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bennett & Co., Ltd., London.
 Clarke, Chapman & Co., Ltd., Gates-
 head-on-Tyne.
 Clark, J. & T., Bradford.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Cole, T. & W., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craig, A. F., & Co., Ltd., Paisley.
 Crook, Thomas T., Bolton.
 Daglish, Robert, & Co., St. Helens.
 Death & Harris, Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Gadd, Thomas (Hulse & Co., Ltd.,
 Proprietors), Manchester.
 Gimson & Co. (Leicester), Ltd.,
 Leicester.
 Good & Menzies, Ltd., Hull.
 Greenwood & Batley, Ltd., Leeds.
 Grieve, John, & Co., Motherwell.
 Haigh, W. B., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Henderson, John M., Aberdeen.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Higginbottom & Mannock, Man-
 chester.

Hoisting Machinery—*continued.*

Hind & Lund, Ltd., Preston.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Larmuth, Thomas, & Co., Manchester.
 Lee, Croll & Co., Lochee.
 Mather, Alex., & Son, Edinburgh.
 Matthews, William, & Co., Manchester.
 Mavor & Coulson, Ltd., Glasgow.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Perkin & Co., Ltd., Leeds.
 Pickering, Ltd., Stockton-on-Tees.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Riley, J. F., Huddersfield.
 Roger, R., & Co., Stockton-on-Tees.
 Rose, Downs & Thompson, Ltd., Hull.
 Ross, R. G., & Son, Glasgow.
 St. George's Ironworks, Ltd., Manchester.
 Schofield & Taylor, Huddersfield.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Siemens Brothers & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor & Hubbard, Leicester.
 Thomson, Son & Co., Dundee.
 Turner & Co., London.
 Umpherston & Co., Ltd., Leith.
 Waller, George, & Co., Stroud.
 Waygood, R., & Co., Ltd., London.
 West End Engine Works Co., Edinburgh.
 West's Gas Improvement Co., Ltd., Manchester.
 Wren, Henry, & Co., Manchester.

Hosiery Machinery—

Blackburn, George, & Sons, Ltd., Nottingham.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hague, B., & Co., Nottingham.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hosiery Machine Building Co., Nottingham.
 Kiddier Brothers, Nottingham.
 Kiddier, J., & Son, Nottingham.
 Mellor, Moses, & Sons, Ltd., Nottingham.
 Pegg, Samuel, & Son, Leicester.
 Taylor, Wordsworth & Co., Leeds.
 Wren, Henry, & Co., Manchester.

Hydraulic Accumulators—

(See *Hydraulic Machinery and Appliances.*)

Hydraulic Bending Machines—

(See *Bending Machines and Rolls.*)

Hydraulic Capstans—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Carrick & Wardale, Gateshead-on-Tyne.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Middleton, Robert, Leeds.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Rice & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.

Hydraulic Cranes—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Berry, Henry, & Co., Leeds.
 Booth, Joseph, & Brothers, Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Campbell & Calderwood, Paisley.
 Carrick & Wardale, Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bennett & Co., Ltd., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craven Brothers, Ltd., Manchester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fullarton, Hodgart & Barclay, Ltd., Paisley.
 Grieve, John, & Co., Motherwell.
 Hanna, Donald & Wilson, Paisley.
 Higginbottom & Mannock, Manchester.
 Hunter & English, London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Leeds Engineering and Hydraulic Co., Leeds.
 M'Neil, John, & Co., Glasgow.
 Middleton, Robert, Leeds.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Scriven & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Stothert & Pitt, Ltd., Bath.
 Whitaker, C., & Co., Bradford.
 Wren, Henry, & Co., Manchester.

Hydraulic Flangers—

(See Flanging Machines.)

Hydraulic Hoists—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashwell & Nesbit, Ltd., London and Leicester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Barker, John, & Sons, Ltd., Oldham.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Carrick & Wardale, Gateshead-on-Tyne.
 Clark, Bennett & Co., Ltd., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craig, A. F., & Co., Ltd., Paisley.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fullerton, Ho'gart & Barclay, Ltd., Paisley.
 Goodwin, Arnold, & Son, London.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Higginbottom & Mannock, Manchester.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Lee, Croll & Co., Lochee.
 Leeds Engineering and Hydraulic Co., Leeds.
 Mathews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave Brothers, Leeds.
 Olroyd, Edwin, & Co., Ltd., Leeds.
 Pickering, Ltd., Stockton-on-Tees.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Stevenson & Co., Ltd., Preston.
 Thomson, Son & Co., Dundee.
 Turner & Co., London.
 Umpherston & Co., Ltd., Leith.
 Whittaker, C., & Co., Bradford.
 Wren, Henry, & Co., Manchester.

Hydraulic Jacks—

Adamson, Daniel, & Co., Dukinfield.
 Berry, Henry, & Co., Leeds.
 Fielding & Platt, Ltd., Gloucester.

Hydraulic Machinery and Appliances—

See also Hydraulic Cranes, Hydra. Capstans, Hydra. Hoists, Hydra. Jacks, Hydra. Presses, Hydra. Pumps, Hydra. Rivetters.

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashwell & Nesbit, Ltd., London.
 Bailey, W. H., & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Cameron, John, Manchester.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Chapiin, Alex., & Co., Glasgow.
 Clark, Bunnett & Co., Ltd., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craven Brothers, Ltd., Manchester.
 Crossley, John, & Co., Halifax.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Dougill, Alf, & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Eltringham, J. T., & Co., South Shields.
 Evans, Joseph, & Sons, Wolverhampton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Foster, Joseph, & Sons, Preston.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
 Galloways, Ltd., Manchester.

**Hydraulic Machinery and Appliances
—continued.**

Goodwin, Arnold, & Son, London.
 Gwynne & Co., London.
 Greenwood & Batley, Ltd., Leeds.
 Hanna, Donald & Wilson, Paisley.
 Hathorn, Davey & Co., Leeds.
 Higginbottom & Mannock, Manchester.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson & Phillips, Old Charlton.
 Kenworthy, Royston & Co., Huddersfield.
 Lambeth Brass and Iron Co., Ltd., London.
 Lee, Croll & Co., Lochee.
 Leeds Engineering and Hydraulic Co., Leeds.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mather, Alex., & Son, Edinburgh.
 Matthews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Middleton, Thomas, & Co., London.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Owen, Brazil & Holborow, Bristol.
 Pearn, Frank, & Co., Ltd., Manchester.
 Pease, Rhodes & Co., Ltd., Bradford.
 Pickering's, Ltd., Stockton-on-Tees.
 Pulsometer Engineering Co. Ltd., London.
 Qualter, Hall & Co., Barnsley.
 Rice & Co., Leeds.
 St. George's Ironworks, Ltd., Manchester.
 Scriven & Co., Leeds.
 Simpson, James, & Co., Ltd., London.
 Smith Brothers & Co., Glasgow.
 Smith, Hugh, & Co., Glasgow.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Stone, J., & Co., London.
 Thomson, Son, & Co., Dundee.
 Thornton & Crebbin, Bradford.
 Tomlinson, G. W., Huddersfield.
 Turner & Co., London.
 Umpherston & Co., Ltd., Leith.
 Walker, Eaton & Co., Sheffield.

Hydraulic Machinery and Appliances*—continued.*

Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Walmsley, Charles, & Co., Ltd., Bury.
 Ward & Haggas, Keighley.
 Waygood, R., & Co., Ltd., London.
 West End Engine Works Co., Edinburgh.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Wren, Henry, & Co., Manchester.

Hydraulic Presses—*(See also Forging Presses and Presses—Steam and Screw.)*

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.
 Brown Brothers & Co., Ltd., Edinburgh.
 Butterworth & Dickinson, Burnley.
 Carmichael, James, & Co., Ltd., Dundee.
 Carruthers, J. H., & Co., Glasgow.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Cowen, G. R., & Co., Nottingham.
 Crossley, John, & Co., Halifax.
 Crow, Harvey & Co., Glasgow.
 Death & Harris, Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Downham, J., & Co., Bury.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Eltringham, J. T., & Co., South Shields.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Fraser, Douglas, & Sons, Arbroath.

Hydraulic Presses—continued.

Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Good & Menzies, Ltd., Hull.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Hacking & Co., Bury.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Houston & Hamilton, Belfast.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hulse & Co., Ltd., Manchester.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kenworthy, Royston & Co., Huddersfield.
 Kincaid, John G., & Co., Greenock.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Leeds.
 McNeil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mather, Alex., & Son, Edinburgh.
 Middleton, Robert, Leeds.
 Moreland, Richard, & Son, Ltd., London.
 Muir, Wm., & Co., Ltd., Manchester.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Perkin & Co., Ltd., Leeds.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Riley, J. H., & Co., Bury.
 Robertson & Orchar, Ltd., Dundee.
 Robinson, Joseph, & Co., Manchester.
 Rose, Downs & Thompson, Ltd., Hull.
 St. George's Ironworks, Ltd., Manchester.
 Scriven & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.
 Stead Brothers, Halifax.
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Thomson, Son & Co., Dundee.
 Thornton & Crebbin, Bradford.
 Tonlinson, G. W., Huddersfield.
 Umpherston & Co., Ltd., Leith.
 Walker, Samuel, Manchester.
 Ward & Haggas, Keighley.

Hydraulic Presses—continued.

Waygood, R., & Co., Ltd., London.
 West End Engine Works Co., Edinburgh.
 White, W. B., Colne.
 Whitaker, C., & Co., Bradford.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Wren, Henry, & Co., Manchester.

Hydro Extractors—

Blake, Barclay & Co., Greenock.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Crossley, John, & Co., Halifax.
 Campbell & Calderwood, Paisley.
 Hanna, Donald & Wilson, Paisley.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Larmuth, Thomas, & Co., Manchester.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Riley, J. H., & Co., Bury.
 Urmson & Thompson, Oldham.

Hydraulic Pumps—

(See Pumps and Pumping Engines.)

Hydraulic Punching Machines—

(See Punching and Shearing Machines.)

Hydraulic Rams—

(See Hydraulic Machinery and Appliances.)

Hydraulic Riveting Machines—

(See also Riveting Machines.)

Arrol, Sir William, & Co., Ltd., Glasgow.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Crow, Harvey & Co., Glasgow.
 Fielding & Platt, Gloucester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Muir, Wm., & Co., Ltd., Manchester.
 Musgrave Brothers, Leeds.
 Rice & Co., Leeds.
 Scriven & Co., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith, Hugh, & Co., Glasgow.

Hydrokineters—

Lees, Anderson & Co., Glasgow.
 Weir, G. & J., Ltd., Glasgow.

Ice-Making and Refrigerating Machinery—

(See also Refrigerating Machinery.)

Cole, T. & W., London.
 Hall, J. & E., Ltd., Dartford.
 Pulsometer Engineering Co., Ltd., London.

India-Rubber Making Machinery—

(See Rubber-Mill Machinery.)

Indicators—Engine—

Arundel & Co., Stockport.
 Bailey, W. H., & Co., Ltd., Manchester.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.
 Storey, Isaac, & Sons, Manchester.

Hydraulic Valves—

(See Sluice-Valves, Cocks and Hydrants; also Valves and Cocks.)

Ingots Moulds—

Brightside Foundry Co., Ltd., Sheffield.
 Denison, Samuel, & Son, Leeds.
 Ellis, J. C. & J. S., Ltd., Sheffield.
 Fowler, John, Sheffield.
 Fraser & Chalmers, Ltd., London.
 Oxley Brothers, Ltd., Sheffield.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Winder Brothers, Ltd., Sheffield.

Ingots—

Bolton Iron and Steel Co., Ltd., Bolton.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Jackson, P. R., & Co., Ltd., Manchester.
 Fox, Samuel, & Co., Sheffield.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.

Injectors—

Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Dewrance & Co., London.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Gresham & Craven, Ltd., Manchester.
 Holden & Brooke, Ltd., Manchester.
 Lancaster & Tonge, Ltd., Manchester.
 Madan, Charles S., & Co., Manchester.
 Merchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Pope, W., & Son, Ltd., London.

Iron and Steel Forgings—

(See *Forgings—Iron and Steel,*)

Iron and Steel Founders—**Iron Founders—**

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Allsup & Co., Ltd., Preston.
 Arundel & Co., Stockport.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Ashton, Frost & Co., Blackburn.
 Ashworth, Elijah, Manchester.
 Atherton Brothers, Ltd., Preston.
 Bailey & Garnett, Ltd., Stalybridge.
 Barraclough, Joseph, & Sons, Barnsley.
 Barrett, R., & Son, Ltd., London.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Beck & Co., Ltd., London.
 Berry, Henry, & Co., Leeds.
 Berry, John, Halifax.
 Bigwood, J., & Sons, Wolverhampton.
 Black, William, South Shields.
 Blair & Co., Ltd., Stockton-on-Tees.
 Booth, Joseph, & Brothers, Leeds.
 Bow, M'Lachlan & Co., Paisley.
 Bradley, R., & Co., Wakefield.
 Brightside Foundry Co., Ltd., Sheffield.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Brown Brothers & Co., Ltd., Edinburgh.
 Buckley & Taylor, Oldham.
 Butler, J., & Co., Halifax.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Calvert & Co., Huddersfield.
 Calvert, T. C., Sunderland.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Carter, James, & Sons, Stalybridge.
 Central Marine Engine Works, West Hartlepool.
 Chadwick, James, Bolton.
 Chapman, Carverhill & Co., Newcastle-on-Tyne.
 Clark, J. & T., Bradford.
 Clark, T. A. W., Leicester.
 Clayton, Howlett & Co., London.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Cowen, G. R. & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Paisley.
 Crook, Thomas T., Bolton.
 Crossley George, Ltd., Cleckheaton.

Iron and Steel Founders—cont.**Iron Founders—continued.**

Crumblehulme, W., & Sons, Ltd., Bolton.
 Daglish, Robert, & Co., St Helens.
 Darling & Sellers, Ltd., Keighley.
 Death & Harris, Leicester.
 Denison, Samuel, & Son, Leeds.
 Dickinson, John, & Co., Keighley.
 Donkin, Bryan, & Co., Ltd., London.
 Douglas Forge Co., Ltd., Wigan.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Dykes, G. & J., Bury.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edie, Henry, & Co., London.
 Ellis, J. C. & J. S., Ltd., Sheffield.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-Lyne.
 Foster, Joseph, & Sons, Preston.
 Fotherby & Co., Wakefield.
 Fowler, John, Sheffield.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Son, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Galloway's, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Ginman & Son, Plumstead.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Gregg, W., Sons & Phoenix, Belfast.
 Haigh, John, & Sons, Ltd., Huddersfield.
 Haley, E. & W. H., Bradford.
 Hall, John, & Son, Oldham.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn & Co., Ltd., Leith.
 Haxby & Sewells, Halifax.
 Hayward Brothers & Eckstein, Ltd., London.
 Heald, John, Chorley.
 Henderson, D. & W., & Co., Glasgow.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hind & Lund, Ltd., Preston.
 Hodge, Samuel, & Sons, Ltd., London.
 Hodgson, H. E., & Co., Cleckheaton.
 Houston & Hamilton, Belfast.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.

Iron Founders—continued.

Hunter & English, London.
 Jackson & Brother, Bolton.
 Jardine, John, Nottingham.
 Jefferson, Joseph, & Brothers, Bradford.
 Johnson, William, & Sons, Leeds.
 Jones, John, & Sons, Liverpool.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Lambeth Brass and Iron Co., Ltd., London.
 Leach & Co., Rochdale.
 Lee, Croll & Co., Lochee.
 Livesey, Henry, Ltd., Blackburn.
 Low, James F., & Co., Monifieth.
 M'Kinnon, William, & Co., Aberdeen.
 McNaught, John & William, Rochdale.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marsden, John, & Son, Liverpool.
 Mather, Alex., & Son, Edinburgh.
 Mellor, Moses, & Sons, Ltd., Nottingham.
 Middleton, Robert, Leeds.
 Middleton, Thomas, & Co., London.
 Moore, James, & Son, Ltd., Belfast.
 Morley, Y. H., Halifax.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.
 Noble & Lund, Felling-on-Tyne.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Oldham Boiler Works Co., Ltd., Oldham.
 Oxley Brothers, Ltd., Sheffield.
 Oxley, George, & Sons, Sheffield.
 Parker, Charles, Sons & Co., Dundee.
 Parkinson, J., Shipley.
 Pease, Rhodes & Co., Ltd., Bradford.
 Petrie, John, Jun., Ltd., Rochdale.
 Pickup & Kelly, Darwen.
 Pilling, John, & Sons, Ltd., Colne.
 Qualter, Hall & Co., Barnsley.
 Rankin & Blackmore, Greenock.
 Ratcliff, J., & Sons, Leeds.
 Redpath & Paris, London.
 Reynolds, James, & Co., Belfast.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Richardson, Tuer & Co., Manchester.
 Richards, W., & Son, Leicester.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robinson, Joseph, & Co., Manchester.
 Roger, R., & Co., Stockton-on-Tees.
 Rose, Downs & Thompson, Ltd., Hull.
 Russell, S., & Sons, Leicester.
 St. George's Ironworks, Ltd., Manchester.

Iron and Steel Founders - *cont.***Iron Founders—*continued.***

Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Scott & Hodgson, Manchester.
 Scriven & Co., Leeds.
 Seager, L. J. & C., Dartford.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Shorrock, J. & R. Darwen.
 Smith, Daniel, & Co., Wolverhampton.
 Smith, G. F., Halifax.
 Spencer, John, & Co., Keighley.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Son, Ltd., London.
 Stirk, John, & Sons, Halifax.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Stubbs, Joseph, Manchester.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Thompson, J. W., Sunderland.
 Thomson, Son & Co., Dundee.
 Thornton & Crebbin, Bradford.
 Tomlinson, G. W., Huddersfield.
 Tonkinson, H., & Sons, Sunderland.
 Urmon & Thompson, Oldham.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wailes, George, & Co., London.
 Wainwright, Thomas, & Sons, Stalybridge.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Wallis Brothers, Sunderland.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.
 Walmsley, Charles, & Co., Ltd., Bury.
 Waterson, H. J., & Co., Sunderland.
 Wearmouth Foundry Co., Ltd., The, Sunderland.
 Wheatley & Taylor, South Shields.
 White, W. B., Colne.
 Whittaker, William, & Sons, Oldham.
 Wilkinson, G., & Sons, Keighley.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Winder Brothers, Ltd., Sheffield.
 Wood & Gee, Wigan.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Wood, J. & E., Bolton.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Iron Founders—*continued.*

Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Iron and Steel Founders—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Crowley, John, & Co., Ltd., Sheffield.
 Dearne & Dove Steel Co., Ltd., Barnsley.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jopling, E., & Sons, Sunderland.
 Musgrave, John, & Son, Ltd., Bolton.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Sharples, William, & Co., Ramsbottom.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Wells, Jonas, Keighley.

Steel Founders—

Allen, Edgar, & Co., Ltd., Sheffield.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darlington.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Osborn, Samuel, & Co., Sheffield.
 Rogerson, John, & Co., Ltd., Walsingham.
 Turton, George, Platts & Co., Sheffield.
 Vickers, Sons & Maxim, Ltd., Sheffield.

Iron and Steel Plates and Bars—

(*See Steel and Iron Plates and Bars.*)

Iron and Steel Works Plant—

(*See Steel and Iron Works Plant; also under Machine Tools, Rolls and Rolling Mill Plant.*)

Ironwork—Constructional—

(See Bridges, Roofs, and Constructional Iron and Steel Work.)

Jacks—Lifting—

(See Hydraulic Jacks, Screw Jacks, Ship Jacks—Hydraulic.)

Jacquard Card-Cutting Punching Machinery—

Ayrton, William, & Co., Manchester.
Benson, William, Nottingham.

Jacquard Looms and Machinery

Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.
Crossley, John, & Co., Halifax.
Hacking & Co., Bury.
Hattersley, George, & Sons, Ltd., Keighley.
Richardson, Tuer & Co., Manchester.
White, W. B., Colne.

Jet Apparatus—

Gresham & Craven, Ltd., Manchester.
Ledward, T., & Co., London and Manchester.
Lees, Anderson & Co., Glasgow.
Meldrum Brothers, Manchester.

Joggling Machines—for Ship Plating and Frames—

Doxford, W., & Sons, Ltd., Sunderland.
Leeds Engineering and Hydraulic Co., Leeds.
Russell & Co., Port-Glasgow.
Smith Brothers & Co., Glasgow.
Smith, Hugh, & Co., Glasgow.

Joiners, Saw-Millers and Patternmakers—

Calvert & Co., Huddersfield.
Gibson, J., & Co., Leeds.
Gregson & Co., London.
Johnson, Thomas, & Co., London.
Robertson, A. W., London.
Scott & Co., Greenock.

Jute Machinery—

(See Flax, Hemp and Jute Machinery.)

Key-Seating Machines—

Butler & Co., Halifax.
Harpers, Ltd., Aberdeen.
Smith & Coventry, Ltd., Manchester.
Spencer, John, & Co., Keighley.
Ward & Haggas, Keighley.

Kilns—

Blake, Barclay & Co., Greenock.
Craig, A. F., & Co. Ltd., Paisley.
Johnson, William, & Sons, Leeds.
Mather, Alex., & Son, Edinburgh.
Milne, James, & Son, Ltd., Edinburgh.
Pullan & Mann, Leeds.
West's Gas Improvement Co., Ltd., Manchester.

Kitchen Ranges—

Ashwell & Nesbit, Ltd., London and Leicester.
Chadwick, James, Bolton.
Crumblehulme, W., & Sons, Ltd., Bolton.
Tonkinson, Henry, & Sons, Sunderland.

Kneading and Mixing Machines

(See Mixing and Kneading Machines.)

Knitting Machines—

Eclipse Machine Co., Ltd., Oldham.
Holroyd, John, & Co., Ltd., Rochdale.
Mellor, Moses, & Sons, Ltd., Nottingham.

Lace Machinery—

Cooke, W., Nottingham.
 Hosiery Machine Building Co., Nottingham.
 Jardine, John, Nottingham.

Lancashire Boilers—

(See **Boilers—Steam.**)

Lathes—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby Bridge.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckley, William, & Co., Sheffield.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.
 Hartley, Binns & Co., Halifax.
 Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hudson, Hall & Griffith, Keighley.
 Hulse & Co., Ltd., Manchester.
 Keighley Engineering Co., Keighley.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Lang, John, & Sons, Johnstone.
 Loudon Brothers, Johnstone.
 M'Dowall, John, & Sons, Johnstone.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford,
 Mudd, W. R., & Co., Leicester.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.

Lathes—continued.

Noble & Lund, Felling-on-Tyne.
 Nottingham Engineering Co., Ltd., Nottingham.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scott Brothers, Halifax.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Spence, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Stell, Stephen, Keighley.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 White, Thomas, & Sons, Paisley.
 White, W. B., Colne.
 Wilkinson, G., & Sons, Keighley.

Launches and Yachts—as a Specialty—

(See also **Shipbuilders and Repairers.**)

Barclay, Curle & Co., Ltd., Glasgow.
 Cochran & Co., Birkenhead.
 Cran, John, & Co., Leith.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eltringham, J. T., & Co., South Shields.
 Fleming & Ferguson, Ltd., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Lobnitz & Co., Ltd., Renfrew.
 Lytham Shipbuilding Co., Lytham.
 M'Kie & Baxter, Glasgow.
 Mackie & Thomson, Glasgow.
 Menzies & Co., Ltd., Leith.
 Ramage & Ferguson, Ltd., Leith.
 Rennoldson, J. P., & Sons, South Shields.
 Robertson, A. W., & Co., London.
 Scott, John, & Co., Kinghorn.
 Scott & Co., Greenock.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.

Launches and Yachts—as a Specialty—
continued.

Stewart, John, & Son, Ltd., London.
Thornycroft, John I., & Co., London.
Vauxhall Ironworks Co., Ltd., London.
Vickers, Sons, & Maxim, Ltd.,
Sheffield.
Yarrow & Co., Ltd., London.

Leather-Working Machinery—
continued.

Larmuth, Thomas, & Co., Man-
chester.
Pearson & Bennion, Ltd., Leicester.
Rawlinsons, Ltd. (late Leeds Machin-
ery Stores Co., Ltd.), Leeds.
Wright, B. & D., Leeds.

Laundry Machinery—

Appleyard, Joseph, Bradford.
Ashwell & Nesbit, Ltd., London and
Leicester.
Benham & Sons, Ltd., London.
Bradford, T., & Co., Manchester.
Broadbent, Thomas, & Sons, Ltd.,
Huddersfield.
Clayton, Howlett & Co., London.
Fraser, John, & Son, London.
Hall, J. & E., Ltd., Dartford.
Haswell, J. Stenson, & Co., Leicester.
M'Kinnon, William, & Co., Aberdeen.
Manlove, Alliott & Co., Ltd., Notting-
ham.
Urnison & Thompson, Oldham.
White, W. B., Colne.

Lenses and Mirrors—

Clarke, Chapman & Co., Ltd., Gates-
head-on-Tyne.

Lifting Jacks—

(See **Hydraulic Jacks; Screw Jacks;**
Ship Jacks—Hydraulie.)

Lifts and Hoists—

(See **Hoisting Machinery, Ash Hoists,**
Coal Hoists, Electric Hoists, Hy-
draulie Hoists, Elevators and
Conveyors.)

Lead-Mining Machinery—

(See **Mining Machinery.**)

Lead (Sheet and Pipe)
Machinery—

Loudon Brothers, Johnstone.
Strang, Joseph, Ltd., Ramisbottom.

Light-Draught Steamers—as a
Specialty—

(See also **Shipbuilders and Repairers.**)

Alley & Maclellan, Glasgow.
Barclay, Curle & Co., Ltd., Glasgow.
Bow, M'Lachlan & Co., Paisley.
Croom & Arthur, Leith.
Cran, John, & Co., Leith.
Fleming & Ferguson, Ltd., Paisley.
Hanna, Donald & Wilson, Paisley.
Henderson, D. & W., & Co., Glasgow.
Inglis, A. & J., Glasgow.
Jones, John, & Co., Liverpool.
Kincaid, John G., & Co., Greenock.
Lobnitz & Co., Ltd., Renfrew.
Lytham Shipbuilding Co., Lytham.
Scott & Co., Greenock.
Smith, A. & D., & Co., London.
Stewart, John, & Son, Ltd., London.
Summers & Scott, Gloucester.
Thornycroft, John I., & Co., London.
Vauxhall Ironworks Co., Ltd., Lon-
don.
Yarrow & Co., Ltd., London.

Leather-Belt Machinery—

Appleyard, Joseph, Bradford.
Greenwood & Batley, Ltd., Leeds.
Pearson & Bennion, Ltd., Leicester.

Leather-Working Machinery—

Crossley, George, & Co., Ltd., Cleck-
heaton.
Greenwood & Batley, Ltd., Leeds.
Gimson & Co. (Leicester), Ltd.,
Leicester.

Lightning Conductors—

Bailey, W. H., & Co., Ltd., Manchester.
 Broadbent, T. W., Huddersfield.
 Dougill, Alf., & Co., Ltd., Leeds.
 Frost & Sons, London.
 Johnson & Phillips, Old Charlton.
 Milne, James, & Son, Ltd., Edinburgh.
 Pease, Rhodes & Co., Ltd., Bradford.
 Remington, T. W., & Co., London.
 Siemens Brothers & Co., Ltd., London.

Lithographic Printing Machinery—

(See *Printing Machinery*.)

Lithographic Stone Grinding Machinery—

Charlesworth, S., & Co., Oldham.
 Greenwood & Batley, Ltd., Leeds.
 Henderson, John M., Aberdeen.
 Ratcliffe, J., & Sons, Leeds.

Locomotives—

Beyer, Peacock & Co., Ltd., Manchester.
 Chapman & Furneaux, Gateshead-on-Tyne.
 Dubs & Co., Glasgow.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hudswell, Clarke & Co., Leeds.
 Hunslet Engine Co., Leeds.
 Johnson & Phillips, Old Charlton.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kitson & Co., Leeds.
 Manning, Wardle & Co., Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Peckett & Sons, Bristol.
 Sharp, Stewart & Co., Ltd., Glasgow.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Walker Brothers, Wigan.

Locomotive Mountings—

Adams, Thomas, Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Chapman & Furneaux, Gateshead-on-Tyne.
 Dewrance & Co., London.
 Dubs & Co., Glasgow.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Gresham & Craven, Ltd., Manchester.
 Lambeth Brass and Iron Co., Ltd., London.
 Madan, Charles S., & Co., Manchester.

Light-Railway Plant—

Fielding & Platt, Ltd., Gloucester.
 Green, Thomas, & Son, Ltd., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Leeds Forge Co., Ltd., Leeds.
 Mechan & Sons, Glasgow.
 Turton, George, Platts & Co., Sheffield.

Linenette-Finishing Machinery

Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Kenworthy, Royston & Co., Huddersfield.
 Riley, J. H., & Co., Bury.
 Walker, Samuel, Manchester.

Linoleum Machinery—

Bertram, James, & Son, Ltd., Edinburgh.
 Bertrams, Ltd., Edinburgh.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fielding & Platt, Ltd., Gloucester.
 Masson, Scott & Co., Ltd., London.
 Mather, Alex., & Son, Edinburgh.
 Milne, James, & Son, Ltd., Edinburgh.
 Strang, Joseph, Ltd., Ramsbottom.
 Summers & Scott, Gloucester.
 West End Engine Works Co., Edinburgh.

Locomotive Mountings—continued.

Marchant, G. M., Huddersfield.
 Morton & Edwards, Stalybridge.
 Moorhouse, Sydney, & Co., Stalybridge.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Looms—

Atherton Brothers, Ltd., Preston.
 Blackburn Loom and Weaving Machinery Making Co., (William Dickinson & Sons), Ltd., Blackburn.
 Butterworth & Dickinson, Burnley.
 Clarke, T. A. W., Leicester.
 Cooper Brothers, Ltd., Burnley.
 Craig, A. F., & Co., Ltd., Paisley.
 Fraser, Douglas, & Sons, Arbroath.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hacking & Co., Bury.
 Hattersley, G., & Sons, Ltd., Keighley.
 Hutchinson, Hollingworth & Co., Ltd., Dobcross and Halifax.
 Jackson & Brother, Bolton.
 Keighley, George, Burnley.
 Larmuth, Thomas, & Co., Manchester.
 Leach & Co., Rochdale.
 Livesey, Henry, Ltd., Blackburn.
 Parker, Charles, Sons & Co., Dundee.
 Pemberton & Co., Burnley.
 Pilling, John, & Sons, Ltd., Colne.
 Platt Brothers & Co., Ltd., Oldham.
 Richardson, Tuer & Co., Manchester.
 Robertson & Orchar, Ltd., Dundee.
 Scriven & Co., Leeds.
 Shorrock, J. & R., Darwen.
 Smith, William, & Brothers, Ltd., Heywood.
 Taylor, Lang & Co., Ltd., Stalybridge.
 Taylor, Thomas, Leicester.
 Thomson, Son & Co., Dundee.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 White, W. B., Colne.

Lubricators (Sight-Feed) and Lubricating Cups—

Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Bailey, W. H., & Co., Ltd., Manchester.
 Billington & Newton, Longport.
 Carter, James, & Sons, Stalybridge.
 Dewart & Co., London.
 Donkin, Bryan, & Co., Ltd., London.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Oldham, Alexander, & Sons, Dukinfield.
 Saxon, George, Manchester.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Machine Tools—

See also Sections underlined:—

Bending Roll's and Machines.
Bewelling Machines.
Boring and Tapping Machines.
Drilling Machines.
Electric Drillers.
Flanging Machines.
Forging Presses.
Grinding and Polishing Machinery.
Hammers—Steam.
Hydraulic Rivetters.
Joggling Machines.
Key-Seating Machines.
Lathes.
Milling Machines.
Multiple Drilling Machines.
Multiple Punching Machines.
Planing Machines.
Punching and Shearing Machines.
Radial Drills.
Rivetting Machines.
Saws for Metals.
Screwing Machines.
Shearing Machines.
Slotting and Shaping Machines.
Wheel Cutting Machines.
Wood Working Machinery.

For Engineering Shops—

Appleyard, Joseph, Bradford.
 Armstrong, Sir W. G., Whitworth Co., Ltd., Manchester.

Machine Tools—continued.**For Engineering Shops—continued.**

Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Beyer, Peacock & Co., Ltd., Manchester.
 Bigwood, J., & Son, Wolverhampton.
 Binns Brothers, Halifax.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Bradbury & Co., Ltd., Oldham.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells and Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Croft & Naylor, Keighley.
 Crookes, Roberts & Co., Sheffield.
 Crossley & Co., Johnstone.
 Darling & Sellers, Ltd., Keighley.
 Davis, A. J., Leicester.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Edwards, George, & Co., Johnstone.
 Fairbairn, Naylor, Macpherson & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fraser, Douglas, & Sons, Arbroath.
 Galloways, Ltd., Manchester.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.
 Hanna, Donald & Wilson, Paisley.
 Harvey, G. & A., Glasgow.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hudson, Hall & Griffith, Keighley.
 Hulse & Co., Ltd., Manchester.
 Keighley Engineering Co., Keighley.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Lang, John, & Sons, Johnstone.
 Loudon Brothers, Johnstone.
 M'Dowall, John, & Sons, Johnstone.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Maud & Turner, Halifax.
 Mercer, Edward, Manchester.
 Midgeley & Sutcliffe, Bradford.
 Mudd, W. R., & Co., Leicester.
 Muir, Wm., & Co., Ltd., Manchester.

For Engineering Shops—continued.

Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 New Found Cycle Components Co., Leicester.
 Noble & Lund, Felling-on-Tyne.
 Nottingham Engineering Co., Ltd., Nottingham.
 Parkinson, J., Shipley.
 Pegg, Samuel, & Son, Leicester.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Ross, R. G., & Son, Glasgow.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scott Brothers, Halifax.
 Seriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Sharp, Stewart, & Co., Ltd., Glasgow.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Stell, Stephen, Keighley.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

For Iron and Steel Works—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Bennie, Janies, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craig & Donald, Johnstone.
 Craven Brothers, Ltd., Manchester.
 Crookes, Roberts & Co., Sheffield.
 Crossley & Co., Johnstone.
 Crow, Harvey & Co., Glasgow.
 Darling & Sellers, Ltd., Keighley.
 Davy Brothers, Ltd., Sheffield.
 Dickinson, John, & Co., Keighley.
 Fielding & Platt, Ltd., Gloucester.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.

Machine Tools—continued.**For Iron and Steel Works—continued.**

Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Hulse & Co., Ltd., Manchester.
 Kendal & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Pratt, F., & Co., Ltd., Halifax.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Sharp, Stewart & Co., Ltd., Glasgow.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith & Coventry, Ltd., Manchester.
 Smith, Hugh, & Co., Glasgow.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.

For Ship, Boiler and Bridge Builders—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Asquith, William, Halifax.
 Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Son, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Binns Brothers, Halifax.
 Butler, J., & Co., Halifax.
 Cameron, John, Manchester.
 Campbells & Hunter, Leeds.
 Craig & Donald, Johnstone.
 Craven Brothers, Ltd., Manchester.
 Crossley & Co., Johnstone.
 Crow, Harvey & Co., Glasgow.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Keighley.
 Dickinson, John, & Co., Keighley.
 Fielding & Platt, Ltd., Gloucester.
 Galloway's, Ltd., Manchester.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.
 Hanna, Donald & Wilson, Paisley.
 Hartley, Binns & Co., Halifax.

For Ship, Boiler and Bridge Builders—continued.

Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Rice & Co., Leeds.
 Ross, R. G., & Son, Glasgow.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Smith, Hugh, & Co., Glasgow.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Son, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

For Tin, Zinc and Sheet-Iron Workers—

Bigwood, J., & Son, Wolverhampton.
 Blackburn & Crawshaw, Wakefield.
 Bradley, R., & Co., Wakefield.
 Smith, Daniel, & Co., Wolverhampton.

Machinists—

(See Agricultural Machinery, Bread and Biscuit Machinery, Dairy Machinery, Dyeing and Bleaching Machinery, Laundry Machinery, Paper-Making Machinery, Textile Machinery.)

Marine Engineers and Boiler-makers—

Alley & Maclellan, Glasgow.
 Allsup & Co., Ltd., Preston.
 Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Barclay, Curle & Co., Ltd., Glasgow.
 Blackwood & Gordon, Port-Glasgow.
 Blair & Co., Ltd., Stockton-on-Tees.
 Bow, M'Lachlan & Co., Paisley.
 Brodie, John, & Co., Ltd., London.
 Brown's Dry Dock and Engineering Co., Ltd., London.
 Caird & Co., Ltd., Greenock.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Campbell & Calderwood, Paisley.
 Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George Ltd., Sunderland.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Clyne, Mitchell & Co., Aberdeen.
 Cochran & Co., Birkenhead.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Doxford, W., & Sons, Ltd., Sunderland.
 Dunlop, David J., & Co., Port-Glasgow.
 Dunsuir & Jackson, Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fisher & Co., Paisley.
 Fleming & Ferguson, Ltd., Paisley.
 Fletcher, Son & Fearnall, Ltd., London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Glengall Iron Works, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Green, R. & H., Ltd., London.
 Greenock Foundry Co., Greenock.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Harrison Engine Co., Ltd., Manchester.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.

Marine Engineers and Boilermakers —continued.

Henderson, D. & W., & Co., Glasgow.
 Hodge, Samuel, & Sons, Ltd., London.
 Holmes, C. D., & Co., Hull.
 Humphrys, Tennant & Co., London.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 Lewis, John, & Sons, Aberdeen.
 Lobnitz & Co., Ltd., Renfrew.
 London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 Lytham Shipbuilding Co., Lytham.
 M'Kie & Baxter, Glasgow.
 Maudslay, Sons & Field, Ltd., London.
 Menzies & Co., Ltd., Leith.
 Morton, S. & H., & Co., Leith.
 Muir & Houston, Glasgow.
 Murdoch & Murray, Port-Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Penn, John, & Son, Ltd., London.
 Potter, W. H., & Sons, Liverpool.
 Ramage & Ferguson, Ltd., Leith.
 Rankin & Blackmore, Greenock.
 Readhead, John, & Sons, South Shields.
 Reid, Thomas, & Sons, Paisley.
 Rennie, G., & Co., London.
 Rennoldson, J. P., & Sons, South Shields.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Richardson, Wigham, & Co., Newcastle-on-Tyne.
 Robertson, A. W., & Co., London.
 Ross & Duncan, Glasgow.
 Rowan, David, & Son, Glasgow.
 Scott, John, & Co., Kinghorn.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Ramsbottom.
 Simons, William, & Co., Ltd., Renfrew.
 Smith, A. & D., & Co., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Thornycroft, John I., & Co., London,

Marine Engineers and Boilermakers
—continued.

Vauxhall Ironworks Co., Ltd., London.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.
 Wilkinson, William, & Co., Ltd., Wigan.
 Workman, Clark & Co., Ltd., Belfast.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yarrow & Co., Ltd., London.

Marine Shafting—

(See **Shafting—Marine, Crank Shafts.**)

Matchmaking Plant—

Summers & Scott, Gloucester.

Mechanical Stokers—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Bennis, Edward, & Co., Ltd., London.
 Haigh, W. B., & Co., Oldham.
 Meldrum Brothers, Manchester.
 Richardson, Tuer & Co., Manchester.
 Sinclair, George, Leith.
 Urmson & Thompson, Oldham.
 West's Gas Improvement Co., Ltd., Manchester.

Metallic Packings—

(See **Packings—Engine.**)

Metals—Special Alloys, Anti-friction, etc.—

Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Bowen & Co., London.
 Bunnist & Chandler, Huddersfield.
 Dewart & Co., London.
 Edie, Henry, & Co., London.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.

Metals—Special Alloys, Anti-friction, etc.—continued.

Frost & Sons, London.
 Lancaster & Tonge, Ltd., Manchester.
 Manganese Bronze and Brass Co., Ltd., London.
 Marchant, G. M., Huddersfield.
 Marsden, Ellis, Liverpool.
 Marsden, John, & Son, Liverpool.
 Morris, J., & Co., London.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Phosphor Bronze Co., Ltd., London.
 Redpath & Paris, London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Wells, Jonas, Keighley.
 West, John, London.
 Whitley Partners, Leeds.
 Williams Brothers, Sheffield.

Meters—Water, Gas, etc.—

(See **Gas Meters, Electric Meters, Water Meters.**)

Mill-Gearing, Shafting and Shaft Fittings—

(See also **Wheels—Geared.**)

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Adamson, Daniel, & Co., Dukinfield.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Ashwell & Nesbit, Ltd., London and Leicester.

Bailey & Garnett, Ltd., Stalybridge.
 Barker, John, & Sons, Ltd., Oldham.
 Barraclough, Joseph, & Sons, Barnsley.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Bentley & Jackson, Ltd., Bury.
 Berry, John, Halifax.
 Bertrams, Ltd., Edinburgh.
 Bigwood, J., & Son, Wolverhampton.
 Blackburn, George, & Sons, Ltd., Nottingham.
 Blake, Barclay & Co., Greenock.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Bradley, R., & Co., Wakefield.
 Bridges, Thomas, & Sons, Wolverhampton,

Mill-Gearing, Shafting and Shaft Fittings—continued.

Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Brown Brothers & Co., Ltd., Edinburgh.
 Buckley & Taylor, Oldham.
 Butler, J., & Co., Halifax.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Calvert & Co., Huddersfield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Carter Brothers, Rochdale.
 Charlesworth, S., & Co., Oldham.
 Clark, J. & T., Bradford.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Cole, T. & W., London.
 Combe, Barbour & Combe, Ltd., Belfast.
 Coulthurst, H. J. & A., Darwen.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Craven Brothers, Ltd., Manchester.
 Crook, Thomas T., Bolton.
 Crossley, George, Ltd., Cleckheaton.
 Daglish, Robert, & Co., St. Helens.
 Darlington Forge Co., Ltd., Darlington.
 Death & Harris, Leicester.
 Dickinson, John, & Co., Keighley.
 Downham, J., & Co., Bury.
 Dryden, Thomas, Preston.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Foster, Joseph, & Sons, Preston.
 Fotherby & Co., Wakefield.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloway, Ltd., Manchester.
 Gimsons, Ltd., Stalybridge.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Glover, M., & Co., Leeds.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Günther, W., & Sons, Oldham.
 Harpers, Ltd., Aberdeen.

Mill-Gearing, Shafting and Shaft Fittings—continued.

Heald, John, Chorley.
 Hetherington, John, & Son, Ltd., Manchester.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Higginbottom & Mannock, Manchester.
 Hind & Lund, Ltd., Preston.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hudswell, Clarke & Co., Leeds.
 Hulse & Co., Ltd., Manchester.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jardine, John, Nottingham.
 Jefferson, Joseph, & Brothers, Bradford.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Johnson, William, & Sons, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Kirkstall Forge Co., Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Lees, Anderson & Co., Glasgow.
 M'Dowall, John, & Sons, Johnstone.
 M'Kinnon, William, & Co., Aberdeen.
 McNaught, John & William, Rochdale.
 M'Neil, John, & Co., Glasgow.
 Matthews, Willian, & Co., Manchester.
 Mather, Alex., & Son, Edinburgh.
 Middleton, Robert, Leeds.
 Middleton, Thomas, & Co., London.
 Milne, James, & Son, Ltd., Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Needham Brothers & Brown, Barnsley.
 New Found Cycle Components Co., Leicester.
 Noble & Lund, Felling-on-Tyne.
 Nottingham Engineering Co., Ltd., Nottingham.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Osborn, Samuel, & Co., Sheffield.
 Owen, Brazil & Holborow, Bristol.
 Pease, Rhodes & Co., Ltd., Bradford.
 Perkin & Co., Ltd., Leeds.
 Pullan & Mann, Leeds.
 Ratcliffe, J., & Sons, Leeds.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Reid, Thomas, & Sons, Paisley.
 Reynolds, James & Co., Belfast,

Mill-Gearing, Shafting and Shaft Fittings—continued.

Riley, J. F., Huddersfield.
 Riley, J. H., & Co., Bury.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robertson & Orchar, Ltd., Dundee.
 Robinson, Joseph, & Co., Manchester.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Russell, S., & Sons, Leicester.
 St. George's Ironworks, Ltd., Manchester.
 Sagar, J., & Co., Halifax.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Scriven & Co., Leeds.
 Seager, L. J. & C., Dartford.
 Sharples, William, & Co., Ramsbottom.
 Shaw, Mark, Huddersfield.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, Daniel, & Co., Wolverhampton.
 Smith, John, Keighley.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stirk, John, & Sons, Halifax.
 Strang, Joseph, Ltd., Ramsbottom.
 Thomson, Son & Co., Dundee.
 Umpherston & Co., Ltd., Leith.
 Unbreakable Pulley and Mill-Gearing Co., Ltd., Manchester.
 Urmsen & Thompson, Oldham.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Wainwright, Thomas, & Sons, Stalybridge.
 Walker Brothers, Wigan.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Wailes, George, & Co., London.
 Walmsley, Charles, & Co., Ltd., Bury.
 Ward & Haggas, Keighley.
 West End Engine Works Co., Edinburgh.
 Whitaker, C., & Co., Bradford.
 White, W. B., Colne.
 Whittaker, William, & Sons, Oldham.
 Winder Brothers, Ltd., Sheffield.
 Wood, John & Edward, Bolton.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wright, B. & D., Leeds.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Milling Cutters—Reamers, etc.—

Atlas Engineering Co., Manchester.
 Birch, G., & Co., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Heap, William, & Co., Ltd. Ashton-under-Lyne.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendal & Gent, Manchester.
 Lang, John, & Sons, Johnstone.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.
 Standard Tool Co., Sowerby Bridge.

Milling Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Atlas Engineering Co., Manchester.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Butler, J., & Co., Halifax.
 Crookes, Roberts & Co., Sheffield.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ltd., Newcastle-on-Tyne.
 Hetherington, John & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Mining Machinery and Tools—**Coal Mining—**

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.

**Mining Machinery and Tools—
continued.****Coal Mining—continued.**

Barracough, Joseph, & Sons, Barnsley.
 Bennis, Edward, & Co., Ltd., Bolton.
 Bradley, R., & Co., Wakefield.
 Brown Brothers & Co., Ltd., Edinburgh.
 Cameron, John, Manchester.
 Carrick & Wardale, Gateshead-on-Tyne.
 Carruthers, J. H., & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Death & Harris, Leicester.
 Douglas Forge Co., Ltd., Wigan.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Dunston Engine Works Co., The, Dunston-on-Tyne.
 Easton, Anderson & Goolden, Ltd., Erith.
 Entwistle & Gass, Ltd., Bolton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Foster, Joseph, & Sons, Preston.
 Fotherby & Co., Wakefield.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Harrison & Hammond, Wakefield.
 Hartnell, Wilson, Leeds.
 Hathorn, Davey & Co., Leeds.
 Heald, John, Chorley.
 Henderson, John M., Aberdeen.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London) Ltd., Leicester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Lancaster & Tonge, Ltd., Manchester.
 Larmuth, Thomas, & Co., Manchester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Mather, Alex., & Son, Edinburgh.
 Mavor & Coulson, Ltd., Glasgow.
 Moore & Korte, Leeds.
 Moreland, Richard, & Son, Ltd., London.
 Napier Brothers, Ltd., Glasgow.
 Needham Brothers & Brown, Barnsley.
 Pearn, Frank, & Co., Ltd., Manchester.
 Qualter, Hall & Co., Barnsley.
 Rosling & Appleby, Bradford.
 Scott & Hodgson, Manchester.
 Siemens Brothers & Co., Ltd., London.

Coal Mining—continued.

Simpson, James, & Co., Ltd., London.
 Walker Brothers, Wigan.
 Wilkinson, William, & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Worsley Mesnes Iron Works Co., Wigan.

Lead Mining—

Allsup & Co., Ltd., Preston.
 Pulsometer Engineering Co., Ltd., London.
 Shepherd, Hill & Co., Ltd., Leeds.

Mine Ventilation Plant—

Bumsted & Chandler, Huddersfield.
 Carrick & Wardale, Gateshead-on-Tyne.
 Thwaites Brothers, Ltd., Bradford.
 Walker Brothers, Wigan.

Mint Machinery—

Fletcher Brothers, Ashton-under-Lyne.
 Greenwood & Batley, Ltd., Leeds.
 Smith, Daniel, & Co., Wolverhampton.

Mixing and Kneading Machines

Crook, Thomas T., Bolton.
 Hind & Lund, Ltd., Preston.
 Johnson, William, & Sons, Leeds.
 Pullan & Mann, Leeds.
 Richmond & Chandler, Ltd., Manchester.

Mortar Mills—

(See also Concrete-Mixing Plant.)

Berry, John, & Co., Halifax.
 Bigwood, J., & Son, Wolverhampton.
 Brightside Foundry Co., Ltd., Sheffield.
 Crook, Thomas T., Bolton.
 Dougill, Alf., & Co., Ltd., Leeds.
 Douglas Forge Co., Ltd., Wigan.
 Heald, John, Chorley.
 Jessop & Appleby Brothers (Leicester and London) Ltd., Leicester.

Mortar Mills—continued.

Johnson, William, & Sons, Leeds.
 Oxley Brothers, Ltd., Sheffield.
 Spencer, John, & Co., Keighley.
 Stothert & Pitt, Ltd., Bath.
 Strang, Joseph, Ltd., Ramsbottom.
 Umpherston & Co., Ltd., Leith.
 Walker, Eaton & Co., Sheffield.
 Waller, George, & Co., Stroud.
 Whitaker, C., & Co., Bradford.
 White, W. B., Colne.
 Wilkinson, Wm., & Co., Ltd., Wigan.

Motor Vehicles—

Bradbury & Co., Ltd., Oldham.
 Clift, E. H., London.
 Coulthard, T., & Co., Preston.
 Dougill, Alf., & Co., Ltd., Leeds.
 Goodwin, Arnold, & Son, London.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Mann & Charlesworth, Leeds.
 Stephens, Smith & Co., Ltd., London.
 Wilkinson, Wm., & Co., Ltd., Wigan.

Moulding Machines—

(See Sand-Moulding Machines,
 Wheel-Moulding Machines.)

Multiple-Drilling Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby Bridge.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendall & Gent, Manchester.
 Maud & Turner, Halifax.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.

Multiple-Drilling Machines—continued.

Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Multiple-Punching Machines—

Berry, Francis, & Sons, Sowerby Bridge.
 Craig & Donald, Johnstone.
 Fielding & Platt, Ltd., Gloucester.
 Hanna, Donald, & Wilson, Paisley.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.

Nails—

Stone, J., & Co., London.
 Williams Brothers, Sheffield.

Navvies—Steam—

(See Excavators—Steam.)

Needles and Wire—

Jardine, John, Nottingham.

Nuts—

(See Bolts, Nuts, Rivets, Screws and Washers.)

Oil-Cake Crushers—

Richmond & Chandler, Ltd., Manchester.

Oil-Cake Presses—

Greenwood & Batley, Ltd., Leeds.
 Manlove, Allott & Co., Ltd., Nottingham.
 Musgrave Brothers, Leeds.
 Rose, Downs & Thompson, Ltd., Hull.

Oil-Distilling Plant—

Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Craig, A. F., & Co., Ltd., Paisley.
 Daglish, Robert, & Co., St. Helens.
 Fraser, John, & Son, London.
 M'Neil, John, & Co., Glasgow.
 Marsden, John, & Son, Liverpool.

Oil Engines—

Andrew, J. E. H., & Co., Ltd., Reddish.
 Bow, M'Lachlan, & Co., Paisley.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clarke, T. A. W., Leicester.
 Donkin, Bryan, & Co., Ltd., London.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Greenwood & Batley, Ltd., Leeds.
 National Gas Engine Co., Ltd., Ashton-under-Lyne.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Perkin & Co., Ltd., Leeds.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.

Oil Extractors—

Foster Brothers (Gloucester), Ltd., Gloucester.
 Haigh, W. B., & Co., Oldham.
 Holroyd, John, & Co., Ltd., Rochdale.
 Thornton & Crebbin, Bradford.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Waygood, R., & Co., Ltd. London.

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Oil Filters—

Bennis, Edward, & Co., Ltd., Bolton.
 Caird & Rayner, London.
 Carruthers, J. H., & Co., Glasgow.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Rose, Downs & Thompson, Ltd., Hull.
 Storey, Isaac, & Sons, Manchester.
 Watson, Henry, & Sons, Newcastle-on-Tyne.

Oil-Gas Apparatus—

Dougill, Alf., & Co., Ltd., Leeds.
 Pope, W., & Son, Ltd., London.
 Wailes, George, & Co., London.

Oil-Mill Machinery—

Greenwood & Batley, Ltd., Leeds.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Middleton, Robert, Leeds.
 Musgrave Brothers, Leeds.
 Rose, Downs & Thompson, Ltd., Hull.
 Summers & Scott, Gloucester.
 Waller, George, & Co., Stroud.

Ordnance Machinery—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Rochdale.
 Muir, Wm., & Co., Ltd., Manchester.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Ward & Haggas, Keighley.

Ordnance—Makers of—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Easton, Anderson & Goolden, Ltd., Erith.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Vickers, Sons & Maxim, Ltd., Sheffield and Erith.

Ore-Crushing Machinery—

Daglish, Robert, & Co., St. Helens.
 Easton, Anderson & Goolden, Ltd., Erith.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Fraser & Chalmers, Ltd., London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.

Ore-Crushing Machinery—continued.

Johnson, William, & Sons, Leeds.
 Madan, Charles S., & Co., Manchester.
 Richardson, Thomas, & Co., Ltd.,
 Hartlepool.
 Tomlinson, James (Rochdale), Ltd.,
 Rochdale.
 Winder Brothers, Ltd., London.

Paper-Bag Making Machinery—

Bunisted & Chandler, Hednesford.
 Milne, James, & Son, Ltd., Edinburgh.

**Ornamental Iron-Work—Gates,
 Railings, etc.—**

Bailey & Garnett, Ltd., Stalybridge.
 Crumblehulme, W., & Sons, Ltd.,
 Bolton.
 Dougill, Alf., & Co., Ltd., Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Turner & Co., London.

Papermaking Machinery—

Aitchison & Co., Edinburgh.
 Bentley & Jackson, Ltd., Bury.
 Bertram, James, & Son, Ltd., Edi-
 burgh.

Bertrams, Ltd., Edinburgh.
 Daglish, Robert, & Co., St. Helens.
 Donkin, Bryan, & Co., Ltd., London.
 Glover, M., & Co., Leeds.
 Greig, John, & Sons, Edinburgh.
 Jackson & Brother, Bolton.
 Luke & Spencer, Ltd., Manchester.
 Masson, Scott & Co., Ltd., London.
 Milne, James, & Son, Ltd., Edinburgh.
 Pickup & Kelly, Darwen.
 Shorrocks, J. & R., Darwen.
 Sinclair, George, Leith.
 Strang, Joseph, Ltd., Ramsbottom.
 Umpherston & Co., Ltd., Leith.
 Walker, James, & Son, Edinburgh.
 Walmsley, Charles, & Co., Ltd., Bury.
 Watson, Henry, & Sons, Newcastle
 on-Tyne.

West End Engine Works Co., Edinburgh.

**Overhead Travelling Cranes—
 (See Cranes.)****Packings—Engine—**

Arundel & Co., Stockport.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Goodwin, Arnold, & Son, London.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Forge Co., Ltd., Leeds.
 Morris, J., & Co., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Oldham, Alexander, & Sons, Dukin-
 field.
 Oldham & Son, Manchester.
 Saxon, George, Manchester.
 Thomson, Son & Co., Dundee.
 Waller, George, & Co., Stroud.
 Wood, John & Edward, Bolton.

Pattern Makers—

Bailey & Garnett, Ltd., Stalybridge.
 Bigwood, J., & Son, Wolverhampton.
 Furness, Sir C., Westgarth & Co.
 Ltd., Middlesbrough.
 Gibson, J., & Co., Leeds.
 Greenock Foundry Co., Greenock.
 Hargreaves, Lloyd, Halifax.

Paint-Mill Machinery—

Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Hind & Lund, Ltd., Preston.
 Johnson, William, & Sons, Leeds.
 Wailes, George, & Co., London.
 Winder Brothers, Ltd., Sheffield.

Pig Iron—

Cammell, Charles, & Co., Ltd.,
 Sheffield.
 Palmer's Shipbuilding and Iron Co.
 Ltd., Jarrow-on-Tyne.

Pile Drivers—

Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Southgate Engineering Co., Ltd., New Southgate, near London.

Pipes—Copper—

Elmore's Patent Copper Depositing Co., Ltd., Leeds.
 Frost & Sons, London.

Pipes—Iron and Steel—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Berry, John, Halifax.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Craig, A. F., & Co., Ltd., Paisley.
 Frost & Sons, London.
 Haley, E. & W. H., Bradford.
 Hanna, Donald & Wilson, Paisley.
 Mechan & Son, Glasgow.
 Musgrave, John, & Son, Ltd., Bolton.

Pistons and Piston Rings—

Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Brewett, Lindley & Co., Ltd., Patricroft.
 Buckley, William, & Co., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Daglish, Robert, & Co., St. Helens.
 Edmeston, Archd., & Sons, Manchester.
 Foster, Joseph, & Sons, Preston.
 Galloways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Heald, John, Chorley.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jones, John, & Sons, Liverpool.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Lees, Anderson & Co., Glasgow.
 Mather, Alex., & Son, Edinburgh.

Pistons and Piston Rings—continued.

Matthews, William, & Co., Manchester.
 Musgrave, John, & Son, Ltd., Bolton.
 Noble & Lund, Felling-on-Tyne.
 Oldham, Alexander, & Sons, Dukinfield.
 Oldham & Son, Manchester.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Perkin & Co., Ltd., Leeds.
 Qualter, Hall & Co., Barnsley.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Thornycroft, John I., & Co., London.
 Urmson & Thompson, Oldham.
 Vauxhall Ironworks Co., Ltd., London.
 Wainwright, Thomas, & Sons, Stalybridge.
 Whitaker, C., & Co., Bradford.
 Wood, John & Edward, Bolton.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.

Planing Machines—

Appleyard, Joseph, Bradford.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby Bridge.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Crookes, Roberts & Co., Sheffield.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Harvey, G. & A., Glasgow.

Planing Machines—continued.

Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Loudon Brothers, Johnstone.
 Midgley & Sutcliffe, Bradford.
 Maud & Turner, Halifax.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Son, Halifax.
 Scott Brothers, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Spencer, John, & Co., Keighley.
 Spencer, James, & Co., Manchester.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Planing Machines—Plate-Edge—

Appleyard, Joseph, Bradford.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Asquith, William, Halifax.
 Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craig & Donald, Johnstone.
 Craven Brothers, Ltd., Manchester.
 Crow, Harvey & Co., Glasgow.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Edwards, George, & Co., Johnstone.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Hetherington, John, & Sons, Ltd., Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.

Planing Machines—Plate-Edge—cont.

Pratt, F., & Co., Ltd., Halifax.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith, Hugh, & Co., Glasgow.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.

Plates—Armour—

(See Armour Plates.)

Plates—Iron and Steel—

(See Steel and Iron Plates and Bars.)

Ploughs—Steam—

Fowler, John, & Co. (Leeds), Ltd.,
 Leeds.
 M'Laren, J. & H., Leeds.

Plummer Blocks and Pedestals—

(See Mill-Gearing, Shafting and Shaft-Gearing.)

Pneumatic Machine Tools—

De Bergue & Co., Ltd., Manchester.
 Fielding & Platt, Ltd., Gloucester.
 Greenwood & Batley, Ltd., Leeds.
 Ross, R. G., & Son, Glasgow.

Portable Engines—

Fowler, John, & Co. (Leeds), Ltd.,
 Leeds.
 Marshall, Sons & Co., Ltd., Gainborough.
 Dougill, Alf., & Co., Ltd., Leeds.

Portable Railways and Rolling Stock—

Fowler, John, & Co. (Leeds), Ltd.,
Leeds.
Henderson, John M., Aberdeen.
Kerr, Stuart & Co., Stoke-on-Trent.

Pottery Machines—

Kerr, Stuart & Co., Stoke-on-Trent.

Presses—Screw and Steam—

(See also **Hydraulic Presses, Filter Presses and Sludge Presses.**)

Benson, William, Nottingham.
Berry, Henry, & Co., Leeds.
Bigwood, J., & Son, Wolverhampton.
Charlesworth, S., & Co., Oldham.
Clayton, Howlett & Co., London.
Crossley, John, & Co., Halifax.
Death & Harris, Leicester.
Farmer, Sir James, & Sons, Ltd.,
Manchester.
Fawcett, Preston & Co., Ltd., Liver-
pool.
Glover, M., & Co., Leeds.
Greenwood & Batley, Ltd., Leeds.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Jackson & Brother, Bolton.
Kenworthy, Royston & Co., Hudders-
field.
Kincaid, John G., & Co., Greenock.
Muir, Wm., & Co., Ltd., Manchester.
Nasmyth, Wilson & Co., Ltd., Man-
chester.
Pegg, Samuel, & Son, Manchester.
Riley, J. H., & Co., Bury.
Robinson, Joseph, & Co., Manchester.
St. George's Ironworks, Ltd., Man-
chester.
Smith, Daniel, & Co., Wolverhampton.
White, W. B., Colne.

Pressure Gauges—

(See **Gauges—Pressure.**)

Printing Machinery—**Cloth—**

(Including **CALICO PRINTING.**)

Edmeston, Archd., & Sons, Man-
chester.
Entwistle & Gass, Ltd., Bolton.
Farmer, Sir James, & Sons, Ltd.,
Manchester.
Gadd, Thomas (Hulse & Co., Ltd.,
Proprietors), Manchester.
Jackson & Brother, Bolton.
Jardine, John, Nottingham.
Strang, Joseph, Ltd., Ramsbottom.
Taylor, Thomas, Leicester.
Walker, Samuel, Manchester.

Floorecloths—

Bertram, James, & Son, Ltd., Edin-
burgh.
Bertranis, Ltd., Edinburgh.
Farmer, Sir James, & Sons, Ltd.,
Manchester.
Gadd, Thomas (Hulse & Co., Ltd.,
Proprietors), Manchester.
Masson, Scott & Co., Ltd., London.
Milne, James, & Son, Ltd., Edinburgh.
Strang, Joseph, Ltd., Ramsbottom.
Summers & Scott, Gloucester.
West End Engine Works Co., Edin-
burgh.

Letterpress—

Bremner Machine Co., Otley.
Charlesworth, S., & Co., Oldham.
Coulthard, T., & Co., Preston.
Dawson & Sons, Otley.
Dawson, H. & J., Bradford.
Foster, Joseph, & Sons, Preston.
Furnival & Co., Manch-ster.
Greenwood & Batley, Ltd., Leeds.
Greig, John, & Sons, Edinburgh.
Hopkinson & Cope, London.
Jardine, John, Nottingham.
Mann, G., & Co., Leeds.
Middleton, Thomas, & Co., London.
Miller & Richard, Edinburgh.
Newsum, Roberts & Co., Leeds.
Payne & Sons, Otley.
Pearson & Bennion, Ltd., Leicester.
Taylor, Thomas, Leicester.
Wade, Josiah, Halifax and Liverpool.
Wailes, George, & Co., London.

Printing Machinery—continued.**Lithographic—**

Bremner Machine Co., Otley.
 Charlesworth, S., & Co., Oldham.
 Dawson & Sons, Otley.
 Greig, John, & Sons, Edinburgh.
 Hopkinson & Cope, London.
 Mann, G., & Co., Leeds.
 Newsum, Roberts & Co., Leeds.
 Payne & Sons, Otley.
 Ratcliffe, J., & Sons, Leeds.

Wall Papers—

Edmeston, Archd., & Sons, Manchester.
 Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
 Pickup & Kelly, Darwen.
 Shorrock, J. & R., Darwen.
 Strang, Joseph, Ltd., Ramsbottom.

Projectiles—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Cammiell, Charles, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.

Propellers—Air—

(See **Fans and Blowers.**)

Propellers and Propeller Blades—Marine—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Barclay, Curle & Co., Ltd., Glasgow.
 Billington & Newton, Longport.
 Black, William, South Shields.
 Brown Brothers & Co., Ltd., Edinburgh.
 Brown, John, & Co., Ltd., Sheffield.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Cammiell, Charles, & Co., Ltd., Sheffield.

Propellers and Propeller Blades—Marine—continued.

Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George, Ltd., Sunderland.
 Coates, Victor, & Co., Ltd., Belfast.
 Cran, John, & Co., Leith.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Dunsmuir & Jackson, Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Greenock Foundry Co., Greenock.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 M'Kie & Baxter, Glasgow.
 Manganese Bronze and Brass Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Phosphor Bronze Co., Ltd., London.
 Ramage & Ferguson, Ltd., Leith.
 Redpath & Paris, London.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Ritchie, Hart & Co., Ltd., Belfast.
 Rogerson, John, & Co., Ltd., Walsingham.
 Smith, A. & D., & Co., London.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Thorneycroft, John I., & Co., London.
 Vauxhall Ironworks Co., Ltd., London.
 Vickers, Sons & Maxim, Ltd., Sheffield and Barrow-in-Furness.

**Propellers and Propeller Blades—
Marine—continued.**

Watson, Henry, & Sons, Newcastle-on-Tyne.
Wearmouth Foundry Co., Ltd., Sunderland.
Wheatley & Taylor, South Shields.
Whitley Partners, Leeds.

Pug Mills—

Berry, John, Halifax.
Clayton, Howlett & Co., London.
Crook, Thomas T., Bolton.
Farmer, Sir James, & Sons, Ltd., Manchester.
Johnson, William, & Sons, Leeds.
Pullan & Mann, Leeds.

Pulley Blocks—

Bailey, W. H., & Co., Ltd., Manchester.
Coubro & Scrutton, London.
Crowley, John, & Co., Ltd., Sheffield.
Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Goodwin, Arnold, & Son, London.
Oxley Brothers, Ltd., Sheffield.

Pulleys — Cast and Wrought Iron—

(See Mill-Gearing, Shafting and Shaft Fittings.)

Pulverizers—

(See Disintegrators and Pulverizers.)

Pumps and Pumping Engines—**Air Pumps and Compressors.**

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Adamson, Daniel, & Co., Dukinfield.
Arrol, Sir William, & Co., Ltd., Glasgow.
Ashton, Frost & Co., Ltd., Blackburn.

Air Pumps and Compressors—continued

Bailey, W. H., & Co., Ltd., Manchester.
Barraclough, Joseph, & Sons, Barnsley.
Bigwood, J., & Son, Wolverhampton.
Bow, M' Lachlan & Co., Paisley.
Bradley, R., & Co., Wakefield.
Browett, Lindley & Co., Ltd., Patricroft.
Brown Brothers & Co., Ltd., Edinburgh.
Buckley & Taylor, Oldham.
Calvert & Co., Huddersfield.
Cameron, John, Manchester.
Campbell & Calderwood, Paisley.
Carnichael, James, & Co., Ltd., Dundee.
Carrick & Wardale, Gateshead-on-Tyne.
Coates, Victor, & Co., Ltd., Belfast.
Craig, A. F., & Co., Ltd., Paisley.
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Death & Harris, Leicester.
Dougill, Alf., & Co., Ltd., Leeds.
Douglas Forge Co., Ltd., Wigan.
Dryden, Thomas, Preston.
Easton, Anderson & Goolden, Ltd., Erith.
Evans, Joseph, & Sons, Wolverhampton.
Fawcett, Preston & Co., Ltd., Liverpool.
Foster, Joseph, & Sons, Preston.
Fowler, John, & Co. (Leeds), Ltd., Leeds.
Fraser & Chalmers, Ltd., London.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
Galloways, Ltd., Manchester.
Good & Menzies, Ltd., Hull.
Goodwin, Arnold, & Son, London.
Greenock Foundry Co., Greenock.
Greenwood & Batley, Ltd., Leeds.
Hanna, Donald & Wilson, Paisley.
Heald, John, Chorley.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Hunter & English, London.
Jackson & Brother, Bolton.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Kincaid, John G., & Co., Greenock.
Lancaster & Tonge, Ltd., Manchester.
Lees, Anderson & Co., Glasgow.
M'Neil, John, & Co., Glasgow.
Manlove, Alliott & Co., Ltd., Nottingham.
Mavor & Coulson, Ltd., Glasgow.

Pumps and Pumping Engines—
*continued.***Air Pumps and Compressors—***continued.*

Middleton, Robert, Leeds.

Milne, James, & Son, Ltd., Edinburgh.

Moreland, Richard, & Son, Ltd.,
London.Nasmyth, Wilson & Co., Ltd., Man-
chester.Needham Brothers & Brown, Barnsley.
Pearn, Frank, & Co., Ltd., Man-
chester.Pulsometer Engineering Co., Ltd.,
London.Robinson, Joseph, & Co., Manchester.
St. George's Ironworks, Ltd., Man-
chester.

Schofield & Taylor, Huddersfield.

Scott, Ernest, & Mountain, Ltd., New-
castle-on-Tyne.Sharples, William, & Co., Rams-
bottom.Simpson, James, & Co., Ltd., London.
Stevenson & Co., Ltd., Preston.Stewart, John, & Son, Ltd., London.
Storey, Isaac, & Sons, Manchester.Strang, Joseph, & Co., Ltd., Rams-
bottom.

Thwaites Brothers, Ltd., Bradford.

Umpherston & Co., Ltd., Leith.

Vauxhall Ironworks Co., Ltd., Lon-
don.

Wailes, George, & Co., London.

Walker Brothers, Wigan.

Walker, Eaton & Co., Sheffield.

Waller, George, & Co., Stroud.

Walmsley, Charles, & Co., Ltd., Bury.

Watson, Henry, & Sons, Newcastle-
on-Tyne.

Weir, G. & J., Ltd., Glasgow.

West End Engine Works Co., Edin-
burgh.

Whitaker, C., & Co., Bradford.

Wilkinson, William, & Co., Ltd.,
Wigan.

Winder Brothers, Ltd., Sheffield.

Worsley Mesnes Iron Works Co.,
Wigan.Worth, Mackenzie & Co., Ltd.,
Stockton-on-Tees.

Yates & Thom, Blackburn.

Centrifugal Pumps—

Adamson, Daniel, & Co., Dukinfield.

Amos & Smith, Hull.

Bailey, W. H., & Co., Ltd., Man-
chester.**Centrifugal Pumps—***continued.*

Bow, M'Lachlan & Co., Paisley.

Bunsted & Chandler, Huddersfield.

Campbell & Calderwood, Paisley.

Carmichael, James, & Co., Ltd.,
Dundee.

Carruthers, J. H., & Co., Glasgow.

Coates, Victor, & Co., Ltd., Belfast.

Dougill, Alf., & Co., Ltd., Leeds.

Drysdale & Co., Glasgow.

Easton, Anderson & Goolden, Ltd.,
Erith.

Entwistle & Gass, Ltd., Bolton.

Evans, Joseph, & Sons, Wolverham-
pton.

Fraser & Chalmers, Ltd., London.

Greenock Foundry Co., Greenock.

Greenwood & Batley, Ltd., Leeds.

Günther, W., & Sons, Oldham.

Gwynne & Co., London.

Jackson & Brother, Bolton.

Jessop & Appleby Brothers (Leicester
and London), Ltd., Leicester.

Lancaster & Tonge, Ltd., Manchester.

M'Kie & Baxter, Glasgow.

Mavor & Coulson, Ltd., Glasgow.

Moreland, Richard, & Son, Ltd.,
London.Pulsometer Engineering Co., Ltd.,
London.

Redpath & Paris, London.

Riley, J. H., & Co., Bury.

Robinson, Joseph, & Co., Manchester.

Rowan, David, & Son, Glasgow.

Scott, Ernest, & Mountain, Ltd.,
Newcastle-on-Tyne.Sharples, William, & Co., Rams-
bottom.

Simpson, James, & Co., Ltd., London.

Stewart, John, & Son, Ltd., London.

Strang, Joseph, & Co., Ltd., Rams-
bottom.

Thwaites Brothers, Ltd., Bradford.

Vauxhall Ironworks Co., Ltd., Lon-
don.

Walmsley, Charles, & Co., Ltd., Bury.

Watson, Henry, & Sons, Newcastle-
on-Tyne.

Winder Brothers, Ltd., Sheffield.

Duplex Pumps—Abbott, John, & Co., Ltd., Gates-
head-on-Tyne.

Adamson, Daniel, & Co., Dukinfield.

Amos & Smith, Hull.

Bailey, W. H., & Co., Ltd., Man-
chester.

Bow, M'Lachlan & Co., Paisley.

**Pumps and Pumping Engines—
continued.****Duplex Pumps—continued.**

Brown Brothers & Co., Ltd., Edinburgh.
 Cameron, John, Manchester.
 Campbell & Calderwood, Paisley.
 Carrick & Wardale, Gateshead-on-Tyne.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clyne, Mitchell & Co., Aberdeen.
 Coates, Victor, & Co., Ltd., Belfast.
 Dougill, Alf., & Co., Ltd., Leeds.
 Easton, Anderson & Goolden, Ltd., Erith.
 Evans, Joseph, & Sons, Wolverhampton.
 Fielding & Platt, Ltd., Gloucester.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Lamont & Co., Paisley.
 Leeds Engineering and Hydraulic Co., Ltd., Leeds.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mavor & Coulson, Ltd., Glasgow.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Pearn, Frank, & Co., Ltd., Manchester.
 Pulsometer Engineering Co., Ltd., London.
 Ramage & Ferguson, Ltd., Leith.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Rowan, David, & Son, Glasgow.
 Saxon, George, Manchester.
 Scott & Hodgson, Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Sharples, William, & Co., Ramsbottom.
 Simpson, James, & Co., Ltd., London.
 Stead Brothers, Halifax.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Son Ltd., London.
 Strang, Joseph, & Co., Ltd., Ramsbottom.
 Vauxhall Ironworks Co., Ltd., London.

Duplex Pumps—continued.

Walker Brothers, Wigan.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Walmsley, Charles, & Co., Ltd., Bury.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Weir, G. & J., Ltd., Glasgow.
 Whitaker, C., & Co., Bradford.
 Winder Brothers, Ltd., Sheffield.

Hydraulic Pumps—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.
 Beck & Co., Ltd., London.
 Benham & Sons, Ltd., London.
 Bentley & Jackson, Ltd., Bury.
 Berry, Henry, & Co., Leeds.
 Bigwood, J., & Son, Wolverhampton.
 Bow, M'Lachlan & Co., Paisley.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Cameron, John, Manchester.
 Campbell & Calderwood, Paisley.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Carruthers, J. H., & Co., Glasgow.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Cowen, G. R., & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Paisley.
 Craven Brothers, Ltd., Manchester.
 Crossley, John, & Co., Halifax.
 Crow, Harvey & Co., Glasgow.
 Death & Harris, Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Downham, John, & Co., Bury.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Entwistle & Gass, Ltd., Bolton.
 Evans, Joseph, & Sons, Wolverhampton.

Pumps and Pumping Engines—
continued.

Hydraulic Pumps—*continued.*

Fawcett, Preston & Co., Ltd., Liverpool,
Fielding & Platt, Ltd., Gloucester.
Foster, Joseph, & Sons, Preston.
Fraser & Chalmers, Ltd., London.
Fraser, Douglas, & Sons, Arbroath.
Fullarton, Hodgart & Barclay, Ltd., Paisley.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
Galloways, Ltd., Manchester.
Good & Menzies, Ltd., Hull.
Goodwin, Arnold, & Son, London.
Greenwood & Batley, Ltd., Leeds.
Gwynne & Co., London.
Hanna, Donald & Wilson, Paisley.
Hathorn, Davey & Co., Leeds.
Holroyd, Horsfield & Wilson, Ltd., Leeds.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Hunter & English, London.
Jackson & Brother, Bolton.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Kenworthy, Royston & Co., Huddersfield.
Lambeth Brass and Iron Co., Ltd., London.
Lancaster & Tonge, Ltd., Manchester.
Leeds Engineering and Hydraulic Co., Ltd., Leeds.
M'Neil, John, & Co., Glasgow.
Manlove, Alliott & Co., Ltd., Nottingham.
Matthews, William, & Co., Manchester.
Middleton, Robert, Leeds.
Moore & Korte, Leeds.
Moreland, Richard, & Sons, Ltd., London.
Milne, James, & Son, Ltd., Edinburgh.
Musgrave Brothers, Leeds.
Nasmyth, Wilson & Co., Ltd., Manchester.
Needham Brothers & Brown, Barnsley.
North-Eastern Marine Engineering Co., Ltd., Sunderland.
Owen, Brazil & Holborow, Bristol.
Pearn, Frank, & Co., Ltd., Manchester.
Perkin & Co., Leeds.
Pulsometer Engineering Co., Ltd., London.
Rice & Co., Leeds.
Richmond, Joseph, & Co., Ltd., London.
Riley, J. H., & Co., Bury.

Hydraulic Pumps—*continued.*

Robinson, Joseph, & Co., Manchester.
Rose, Downs & Thompson, Ltd., Hull.
St. George's Ironworks, Ltd., Manchester.
Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
Shaw, Mark, Huddersfield.
Simpson, James, & Co., Ltd., London.
Smith, Hugh, & Co., Glasgow.
Smith Brothers & Co., Glasgow.
Stead Brothers, Halifax.
Stevenson & Co., Ltd., Preston.
Stewart, John, & Son, Ltd., London.
Storey, Isaac, & Sons, Manchester.
Strang, Joseph, & Co., Ltd., Ramsbottom.
Umpherston & Co., Ltd., Leith.
Wailes, George, & Co., London.
Walker Brothers, Wigan.
Walker, Eaton & Co., Sheffield.
Walker, James, & Son, Edinburgh.
Walker, Samuel, Manchester.
Waller, George, & Co., Stroud.
Walmsley, Charles, & Co., Ltd., Bury.
Watson, Henry, & Sons, Newcastle-on-Tyne.
West End Engine Works Co., Edinburgh.
Whitaker, C., & Co., Bradford.
Wilkinson, William, & Co., Ltd., Wigan.
Worsley Mesnes Iron Works Co., Wigan.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
Wren, Henry, & Co., Manchester.
Yates & Thom, Blackburn.

Pumping Engines—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Adamson, Daniel, & Co., Dukinfield.
Amos & Smith, Hull.
Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
Ashton, Frost & Co., Ltd., Blackburn.
Ashworth, Elijah, Manchester.
Bailey, W. H., & Co., Ltd., Manchester.
Barraclough, Joseph, & Sons, Barnsley.
Benham & Sons, Ltd., London.
Bigwood, J., & Son, Wolverhampton.

**Pumps and Pumping Engines—
continued.****Pumping Engines—continued.**

Bow, M'Lachlan & Co., Paisley.
 Bradley, R., & Co., Wakefield.
 Brown Brothers & Co., Ltd., Edinburgh.
 Buckley & Taylor, Oldham.
 Cameron, John, Manchester.
 Campbell & Calderwood, Paisley.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Carruthers, J. H., & Co., Glasgow.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Death & Harris, Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Entwistle & Gass, Ltd., Bolton.
 Evans, Joseph, & Sons, Wolverhampton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Fleming & Ferguson, Ltd., Paisley.
 Foster, Joseph, & Sons, Preston.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Galloway, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Goodwin, Arnold, & Son, London.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Heald, John, Chorley.
 Hathorn, Davey & Co., Leeds.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.

Pumping Engines—continued.

Kenworthy, Taylor & Co., Barnsley.
 Kincaid, John G., & Co., Greenock.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Ltd., Leeds.
 M'Kie & Baxter, Glasgow.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Matthews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Owen, Brazil & Holborow, Bristol.
 Pearn, Frank, & Co., Ltd., Manchester.
 Perkin & Co., Ltd., Leeds.
 Qualter, Hall & Co., Barnsley.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rowan, David, & Son, Glasgow.
 St. George's Ironworks, Ltd., Manchester.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Sharples, William, & Co., Ramsbottom.
 Simpson, James, & Co., Ltd., London.
 Smith, Hugh, & Co., Glasgow.
 Stead Brothers, Halifax.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, & Co., Ltd., Ramsbottom.
 Umpherston & Co., Ltd., Leith.
 Vauxhall Ironworks Co., Ltd., London.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Walker, James, & Son, Edinburgh.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.

Pumps and Pumping Engines— *continued.*

Pumping Engines—continued.

Walmsley, Charles, & Co., Ltd., Bury.
Watson, Henry, & Sons, Newcastle-on-Tyne.
West End Engine Works Co., Edinburgh.
Wilkinson, William, & Co., Ltd., Wigan.
Winder Brothers, Ltd., Sheffield.
Wood & Gee, Wigan.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
Worsley Mesnes Iron Works Co., Wigan.
Yates & Thom, Blackburn.

Punching and Shearing Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
Asquith, William, Halifax.
Bennie, James, & Sons, Glasgow.
Berry, Francis, & Sons, Sowerby Bridge.
Berry, Henry, & Co., Leeds.
Birch, G., & Co., Manchester.
Brightside Foundry Co., Ltd., Sheffield.
Buckton, Joshua, & Co., Ltd., Leeds.
Butler, J., & Co., Halifax.
Cameron, John, Manchester.
Craig & Donald, Johnstone.
Craven Brothers, Ltd., Manchester.
Crow, Harvey & Co., Glasgow.
Davis & Primrose, Leith.
Davy Brothers, Ltd., Sheffield.
Dean, Smith & Grace, Ltd., Keighley.
De Bergue & Co., Ltd., Manchester.
Dickinson, John, & Co., Keighley.
Edward, George, & Co., Johnstone.
Fielding & Platt, Ltd., Gloucester.
Greenwood & Batley, Ltd., Leeds.
Hanna, Donald & Wilson, Paisley.
Hetherington, John, & Sons, Ltd., Manchester.
Hodgson, H. E., & Co., Cleckheaton.
Hulse & Co., Ltd., Manchester.
Luke & Spencer, Ltd., Manchester.
Maud & Turner, Halifax.
Midgley & Sutcliffe, Bradford.
Muir, Wm., & Co., Ltd., Manchester.

Punching and Shearing Machines— *continued.*

Nasmyth, Wilson & Co., Ltd., Patricroft.
Noble & Lund, Felling-on-Tyne.
Oxley Brothers, Ltd., Sheffield.
Pratt, F., & Co., Ltd., Halifax.
Redman, C., & Sons, Halifax.
Scriven & Co., Leeds.
Shepherd, Hill & Co., Ltd., Leeds.
Smith Brothers & Co., Glasgow.
Smith, Daniel, & Co., Wolverhampton.
Smith, G. F., Halifax.
Smith, Hugh, & Co., Glasgow.
Spencer, John, & Co., Keighley.
Stirk, John, & Sons, Halifax.
Walker, Eaton & Co., Sheffield.
Ward & Haggas, Keighley.
White, W. B., Colne.
Wilkinson, G., & Sons, Keighley.

Quarry Plant—

(See **Stone-Working Machinery.**)

Quartz Crushing Machinery—

(See **Ore-Crushing Machinery.**)

Radial Drills—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle on-Tyne and Manchester.
Asquith, William, Halifax.
Atlas Engineering Co., Manchester.
Berry, Francis, & Sons, Sowerby Bridge.
Buckton, Joshua, & Co., Ltd., Leeds.
Butler, J., & Co., Halifax.
Campbells & Hunter, Leeds.
Craven Brothers, Ltd., Manchester.
Crossley & Co., Johnstone.
Darling & Sellers, Ltd., Keighley.
Dean, Smith & Grace, Ltd., Keighley.
Dickinson, John, & Co., Keighley.
Fraser, Douglas, & Sons, Arbroath.
Greenwood & Batley, Ltd., Leeds.
Hartley, Binns & Co., Halifax.
Hetherington, John, & Sons, Ltd., Manchester.
Hodgson, H. E., & Co. Cleckheaton.
Holroyd, John, & Co., Ltd., Rochedale.

Radial Drills—continued.

Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Manchester,
 Noble & Lund, Felling-on-Tyne.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, G. F., Halifax.
 Smith & Coventry, Ltd., Manchester.
 Spencer, John, & Co., Keighley.
 Spencer, James, & Co., Manchester.
 Standard Tool Co., Sowerby Bridge.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Radiators—

(See Heating Apparatus.)

Rail-Benders—

Berry, Francis, & Sons, Sowerby Bridge.
 Craven Brothers, Ltd., Manchester.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Fielding & Platt, Ltd., Gloucester.
 Henderson, John M., Aberdeen.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith, Daniel, & Co., Wolverhampton.
 Ward & Haggas, Keighley.

Rails—Iron and Steel—

Bolton Iron and Steel Co., Ltd.,
 Bolton.
 Cammell, Charles, & Co., Ltd., Shef-
 field.
 Fox, Samuel, & Co., Ltd., Sheffield.
 Kerr, Stuart & Co., Stoke-on-Trent.

Railway Plant—

(See also Axles, Buffers, Tyres,
 Locomotives, Light Railway
 Plant.)

Allen, Edgar, & Co., Ltd., Sheffield.
 Bolton Iron and Steel Co., Ltd.,
 Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cravens, Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darling-
 ton.
 Fielding & Platt, Ltd., Gloucester.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Greenwood & Batley, Ltd., Leeds.
 Gresham & Craven, Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kirkstall Forge Co., Leeds.
 Leeds Forge Co., Ltd., Leeds.
 Mather, Alex., & Son, Edinburgh.
 Pope, W., & Son, Ltd., London.
 Spencer, John, & Sons, Ltd., New-
 castle-on-Tyne.
 Stone, J., & Co., London.
 Turton, George, Platts & Co.,
 Sheffield.
 Vickers, Sons & Maxim, Ltd., Shef-
 field.

Railway Works Plant—

(See Contractors' Plant.)

Rams—Hydraulic—

(See also Hydraulic Machinery and
 Appliances.)

Fielding & Platt, Ltd., Gloucester.

Ranges—Kitchen—

Ashwell & Nesbit, Ltd., London and
 Leicester.
 Chadwick, James, Bolton.
 Crumblehulme, W., & Sons, Ltd.,
 Bolton.
 Tonkinson, Henry, & Sons, Sunder-
 land.

Recovery Plant for Bye-Products—

Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Carrick & Wardale, Gateshead-on-Tyne.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Refrigerating Machinery—

Cole, T. & W., London.
 Hall, J. & E., Ltd., Dartford.
 M'Kinnon, William, & Co., Aberdeen.
 Pulsometer Engineering Co., Ltd., London.
 Sharples, William, & Co., Ramsbottom.
 Stevenson & Co., Ltd., Preston.

Reducing Valves—

Adams, Thomas, Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Carter, James, & Sons, Stalybridge.
 Clark, J. & T., Bradford.
 Cockburn, David, Glasgow.
 Cockburn, George, & Co., Glasgow.
 Dewartance & Co., London.
 Eastwood, Walter, Ashton-under-Lyne.
 Feather, George R., Bolton.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Jackson & Brother, Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Roger, R., & Co., Stockton-on-Tees.
 Schofield & Taylor, Huddersfield.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Turnbull, Alexander, & Co., Glasgow.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Whitley Partners, Leeds.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Refuse Destructors—

(See Destructors—Refuse.)

Relief Valves—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adams, Thomas, Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Berry, Henry, & Co., Leeds.
 Carter, James, & Sons, Stalybridge.
 Clark, J. & T., Bradford.
 Cockburn, David, Glasgow.
 Cockburn, George, & Co., Glasgow.
 Feather, George R., Bolton.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Jackson & Brother, Bolton.
 Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Rice & Co., Leeds.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Turnbull, Alexander, & Co., Glasgow.
 Urnson & Thompson, Oldham.
 Whitley Partners, Leeds.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Reeds and Reed-Making Machinery—

Cook, S., & Co., Bury.

Repairers—Ship and Engine—

(See also **Shipbuilders, Dry Dock Proprietors, Slipway (Ship's Repairing) Proprietors.**)

Albert Dock Engine Works, London.
Allsup & Co., Ltd., Preston.
Amor, R., & Co., London.
Amos & Smith, Hull.
Barclay, Curle & Co., Ltd., Glasgow.
Blackwood & Gordon, Port-Glasgow.
Brodie, John, & Co., Ltd., London.
Brown's Dry Dock and Engineering Co., Ltd., London.
Cran, John, & Co., Leith.
Central Marine Engine Works, The West Hartlepool.
Croom & Arthur, Leith.
Deptford Dry Docks Co., Ltd., London.
Dickinson, John, & Sons, Ltd., Sunderland.
Dunsmuir & Jackson, Glasgow.
Dunston Engine Works Co., Dunston-on-Tyne.
Eltringham, J. T., & Co., South Shields.
Fawcett, Preston & Co., Ltd., Liverpool.
Fletcher, Son & Fearnall, Ltd., London.
Glengall Iron Works, Ltd., London.
Gourlay Brothers & Co., Dundee.
Green, R. & H., Ltd., London.
Hall, A., & Co., Aberdeen.
Hall, Russell & Co., Ltd., Aberdeen.
Hanna, Donald & Wilson, Paisley.
Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
Hawthorns & Co., Ltd., Leith.
Henderson, D. & W., & Co., Glasgow.
Hodge, Samuel, & Sons, Ltd., London.
Holmes, C. D., & Co., Hull.
Inglis, A. & J., Glasgow.
Jones, John, & Sons, Liverpool.
Kincaid, John G., & Co., Greenock.
Laird Brothers, Birkenhead.
Lees, Anderson & Co., Glasgow.
Lester & Perkins, London.
Lobnitz & Co., Ltd., Renfrew.
London Graving Dock Co., Ltd., London.
Menzies & Co., Ltd., Leith.
Morton, S. & H., & Co., Leith.
Napier, R., & Sons, Ltd., Glasgow.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.

Repairers—Ship and Engine—continued.

Potter, W. H., & Sons, Liverpool.
Rait & Gardiner, London.
Readhead, John, & Sons, South Shields.
Redpath & Paris, London.
Renoldson, J. P., & Sons, South Shields.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Rodger, A., & Co., Port-Glasgow.
Robertson, A. W., & Co., London.
Robinson & Dodd, London.
St. George's Ironworks, Ltd., Manchester.
Scott & Co., Greenock.
Smith, A. & D., & Co., London.
Stephens, Smith & Co., Ltd., London.
Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
Stewart, John, & Sons, Ltd., London.
Stothert, G. K., & Co., Bristol.
Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.

Rice Mill Machinery—

Foster, Joseph, & Sons, Preston.
Fullarton, Hodgart & Barclay, Ltd., Paisley.
Hind & Lund, Ltd., Preston.
Hunter & English, London.
M'Neil, John, & Co., Glasgow.
Mather, Alex., & Son, Edinburgh.
Waygood, R., & Co., Ltd., Newcastle-on-Tyne.

Riveting Machines—Hydraulic and Pneumatic—

Arrol, Sir William, & Co., Ltd., Glasgow.
Bennie, James, & Sons, Glasgow.
Berry, Henry, & Co., Leeds.
Brown Brothers & Co., Ltd., Edinburgh.
Crow, Harvey & Co., Glasgow.
De Bergue & Co., Ltd., Manchester.
Dickinson, John, & Co., Keighley.
Fielding & Platt, Ltd., Gloucester.
Galloways, Ltd., Manchester.
Leeds Engineering and Hydraulic Co., Leeds.
Musgrave Brothers, Leeds.
Rice & Co., Leeds.
Ross, R. G., & Son, Glasgow.
Smith Brothers & Co., Glasgow.
Smith, Daniel, & Co., Wolverhampton.
Smith, Hugh, & Co., Glasgow.

Rivet-Making Machinery—

Adamson, Daniel, & Co., Dukinfield.
 Greenwood & Batley, Ltd., Leeds.
 Marsden, Samuel, & Son, Ltd., Manchester.

Rivets—

(*See Bolts, Rivets, Screws, Nuts and Washers.*)

Road Rollers—

(*See Rollers—Road—Steam.*)

Rock Breakers—

(*See Stone Breakers, Ore Crushers.*)

Rock Drills—

Clarke, T. A. W., Leicester.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Foster, Joseph, & Sons, Preston.
 Fraser & Chalmers, Ltd., London.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Henderson, John M., Aberdeen.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Larmuth, Thomas, & Co., Manchester.
 Madan, Charles S., & Co., Manchester.
 Middleton, Robert, Leeds.
 Rosling & Appleby, Bradford.
 St. George's Ironworks, Ltd., Manchester.
 Siemens Brothers & Co., Ltd., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Vauxhall Ironworks Co., Ltd., London.
 Wood, John & Edward, Bolton.

Rollers—Road—Steam—

Calvert & Co., Huddersfield.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Green, Thomas, & Son, Ltd., Leeds.
 M'Laren, J. & H., Leeds.
 Marshall, Sons & Co., Ltd., Gainsborough.

Rolling Mill Engines—

Adamson, Daniel, & Co., Dukinfield.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Crow, Harvey & Co., Glasgow.
 Davy Brothers, Ltd., Sheffield.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 St. George's Ironworks, Ltd., Manchester.
 Saxon, George, Manchester.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Stevenson & Co., Ltd., Preston.
 Thornton & Crebbin, Bradford.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yates & Thom, Blackburn.

Rolls—Bending—

(*See Bending Rolls.*)

Rolls—Calender—

(*See Calenders.*)

Rolls and Rolling-Mill Plant—

Brightside Foundry Co., Ltd., Sheffield.
 Davy Brothers, Ltd., Sheffield.
 Fowler, John, Sheffield.
 Galloways, Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Jackson, P. R., & Co., Ltd., Manchester.
 Oxley Brothers, Ltd., Sheffield.
 Thornton & Crebbin, Bradford.
 Umpherston & Co., Ltd., Leith.
 Walker, Eaton & Co., Sheffield.
 Winder Brothers, Ltd., Sheffield.

Roofs—

(See **Bridges, Roofs and Structural Iron and Steel Work.**)

Rope Pulleys—

(See **Mill-Gearing, Shafting and Shaft Fittings.**)

Rope, Twine and Braid Machinery—

Bywater, William, Leeds.
Clarke, T. A. W., Leicester.
Combe, Barbour & Combe, Ltd., Belfast.
Curtis, Sons & Co., Manchester.
Fraser, Douglas, & Sons, Arbroath.
Lawson, Samuel, & Sons, Leeds.
Taylor, Thomas, Leicester.
Taylor, Wordsworth & Co., Leeds.

Rubber-Mill Machinery—

Bertram, James, & Son, Ltd., Edinburgh.
Bertrams, Ltd., Edinburgh.
Greig, John, & Sons, Edinburgh.
Heald, John, Chorley.
Masson, Scott & Co., Ltd., London.
Robinson, Joseph, & Co., Manchester.
Umpherston & Co., Ltd., Leith.
Walker, Samuel, Manchester.

Safety Valves—

Adamson, Daniel, & Co., Dukinfield.
Adams, Thomas, Manchester.
Bailey, W. H., & Co., Ltd., Manchester.
Baldwin, James, Keighley.
Beeley, Thomas, Hyde.
Berry, Henry, & Co., Leeds.
Billington & Newton, Longport.
Carter, James, & Sons, Stalybridge.
Clark, J. & T., Bradford.
Cockburn, David, Glasgow.
Cockburn, George, & Co., Glasgow.
Dewrance & Co., London.
Donkin, Bryan, & Co., Ltd., London.

Safety Valves—continued.

Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Empire Engineering Co., Manchester.
Feather, George R., Bolton.
Fielding & Platt, Ltd., Gloucester.
Fletcher Brothers, Ashton-under-Lyne.
Frost & Sons, London.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
Galloways, Ltd., Manchester.
Jackson & Brother, Bolton.
Lambeth Brass and Iron Co., Ltd., London.
Lancaster & Tonge, Ltd., Manchester.
Marchant, G. M., Huddersfield.
Meadowcroft, C. H., & Brother, Dukinfield.
Moorhouse, Sydney, & Co., Stalybridge.
Moorhouse, Walter, & Co., Stalybridge.
Morton & Edwards, Stalybridge.
Oldham Boiler Works Co., Ltd., Oldham.
Pease, Rhodes & Co., Ltd., Bradford.
Rice & Co., Leeds.
Roger, R., & Co., Stockton-on-Tees.
Schofield & Taylor, Huddersfield.
Storey, Isaac, & Sons, Manchester.
Strang, Joseph, Ltd., Ramsbottom.
Turnbull, Alexander, & Co., Glasgow.
Urison & Thompson, Oldham.
Whitley Partners, Leeds.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Sand-Moulding Machines—

Darling & Sellers, Ltd., Keighley.
Dickinson, John, & Co., Keighley.

Sanitary Appliances—

(See also **Heating and Ventilating Engineers.**)

Frost & Sons, London.
Milne, James, & Son, Ltd., Edinburgh.
Stone, J., & Co., London.
Waller, George, & Co., Stroud.

Saw Benches—

Clarke, T. A. W., Leicester.
 Glover, M., & Co., Leeds.
 Haigh, W. B., & Co., Oldham.
 Hudson, Hall & Griffith, Keighley.
 M'Dowall, John, & Sons, Johnstone.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Sagar, J., & Co., Halifax.
 Taylor, Thomas, Leicester.
 Thomson, Son & Co., Dundee.
 Ward & Haggas, Keighley.
 White, Thomas, & Sons, Paisley.

Saw Makers—

Allen, Edgar, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Osborn, Samuel, & Co., Sheffield.

Saw Mill Machinery—

(See Wood-Working Machinery.)

Saw Sharpening Machines—

Birch, G., & Co., Manchester.
 Dean, Smith & Grace, Ltd., Keighley.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hulse & Co., Ltd., Manchester.
 Luke & Spencer, Ltd., Manchester.
 M'Dowall, John, & Sons, Johnstone.
 Noble & Lund, Felling-on-Tyne.
 Sagar, J., & Co., Halifax.

Saws for Metals—

Allen, Edgar, & Co., Ltd., Sheffield.
 Bennie, James, & Sons, Glasgow.
 Birch, G., & Co., Manchester.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Craven Brothers, Ltd., Manchester.
 Davy Brothers, Ltd., Sheffield.
 Dean, Smith & Grace, Ltd., Keighley.

Saws for Metals—continued.

Firth, Thomas, & Sons, Ltd., Sheffield.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Nolle & Lund, Felling-on-Tyne.
 Redman, C., & Sons, Halifax.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scriven & Co., Leeds.
 Smith Brothers & Co., Glasgow.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Screw Jacks—

Galloways, Ltd., Manchester.
 Herbert, E. G., Manchester.

Screw Propellers—

(See Propellers and Propeller
 Blades—Marine.)

Screwing Machines—

Armstrong, Sir W. G., Whitworth &
 Co., Ltd., Manchester.
 Berry, Francis, & Sons, Sowerby
 Bridge.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Craven Brothers, Ltd., Manchester.
 Dean, Smith & Grace, Ltd., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton
 under Lyne.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Marsden, Samuel, & Son, Ltd.,
 Manchester.
 Mercer, Edward, Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Pratt, F., & Co., Ltd., Halifax.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, G. F., Halifax.
 Smith & Coventry, Ltd., Manchester.

Screwing Machines—continued.

Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Screws and Studs—

Holroyd, John, & Co., Ltd., Rochdale.
 Kirby Banks Screw Co., Ltd., Leeds.
 Lang, John, & Sons, Johnstone.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Mercer, Edward, Manchester.
 Pool, L., & Son, Leeds.

Search-Light Projectors—

Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London and Chelmsford.
 Easton, Anderson & Goolden, Ltd., Erith.
 Hall, J. P., & Co., Oldham.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Siemens Brothers & Co., Ltd., London.

Seed-Crushing Machinery—

Downham, D., & Co., Bury.
 Greenwood & Batley, Ltd., Leeds.
 Harrison & Hammond, Wakefield.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Middleton, Robert, Leeds.
 Richmond & Chandler, Ltd., Manchester.
 Rose, Downs & Thompson, Ltd., Hull.

Separators—

Carter, James., & Sons, Stalybridge.
 Cole, T. & W., London.

Separators—continued.

Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Haigh, W. B., & Co., Oldham.
 Johnson, William, & Sons, Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Schofield & Taylor, Huddersfield.
 Urmsom & Thompson, Oldham.

Sewage Plant—

Ashton, Frost & Co., Ltd., Blackburn.
 Drysdale & Co., Glasgow.
 Gwynne & Co., London.
 Holroyd, Horsfield, & Wilson, Ltd., Leeds.
 M'Kinnon, William, & Co., Aberdeen.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Waller, George, & Co., Stroud.
 Winder Brothers, Ltd., Sheffield.
 Woods, Hamilton, & Co., Ltd., Manchester.

Sewing Machines—

Bradbury & Co., Ltd., Oldham.
 Eclipse Machine Co., Ltd., Oldham.
 Holroyd, John, & Co., Ltd., Rochdale.

Shafting—Marine—

(See also Crank-Shafts.)

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown Brothers & Co., Ltd., Edinburgh.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George, Ltd., Sunderland.
 Crow, Harvey & Co., Glasgow.
 Darlington Forge Co., Ltd., Darlington.
 Dickinson, John, & Sons, Ltd., Sunderland.

Shafting—Marine—continued.

Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Hawthorn, R. & W., Leslie, & Co., Ltd., Newcastle-on-Tyne.
 Hawthorn & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Ince Forge Co., Wigan.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Vickers, Sons & Maxim, Ltd., Sheffield and Barrow-in-Furness.
 Woodhouse & Rixson, Sheffield.

Shafting—Mill—

(See Mill Gearing, Shafting, etc.)

Shaping Machines—

(See Slotting and Shaping Machines.)

Shearing Machines—

(See Punching and Shearing Machines.)

Shear-Legs—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Henderson, John M., Aberdeen.

Shears—for Blooms and Plates—

(See also Steel and Iron Works Plant.)

Crow, Harvey & Co., Glasgow.
 Davy Brothers, Ltd., Sheffield.
 Scriven & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.

Shipbuilders and Repairers—

(See also Repairers—Ship and Engine.)

Alley & Maclellan, Glasgow.
 Allsup & Co., Ltd., Preston.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Barclay, Curle & Co., Ltd., Glasgow.
 Blackwood & Gordon, Port-Glasgow.
 Bow, M'Lachlan & Co., Paisley.
 Brodie, John, & Co., Ltd., London.
 Brown's Dry Dock and Engineering Co., Ltd., London.
 Caird & Co., Ltd., Greenock.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Connell, Charles, & Co., Glasgow.
 Cran, John, & Co., Leith.
 Croom & Arthur, Leith.
 Doxford, W., & Sons, Ltd., Sunderland.
 Duncan, Robert, & Co., Ltd., Port Glasgow.
 Dunlop, David J., & Co., Port Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eltringham, J. T., & Co., South Shields.
 Fleming & Ferguson, Ltd., Paisley.
 Fletcher, Son & Fearnall, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Green, R. & H., Ltd., London.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hamilton, William, & Co., Port Glasgow.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorn & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.

Shipbuilders and Repairers—continued.

Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 Lobnitz & Co., Ltd., Renfrew.
 London and Glasgow Engineering and
 Iron Shipbuilding Co., Ltd.,
 Glasgow.
 London Graving Dock Co., Ltd.,
 London.
 Lytham Shipbuilding Co., Lytham.
 M'Kie & Baxter, Glasgow.
 Mackie & Thomson, Glasgow.
 Menzies & Co., Ltd., Leith.
 Morton, S. & H., & Co., Leith.
 Murdoch & Murray, Port-Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering
 Co., Ltd., Wallsend-on-Tyne and
 Sunderland.
 Palmer's Shipbuilding and Iron Co.,
 Ltd., Jarrow-on-Tyne.
 Potter, W. H., & Sons, Liverpool.
 Ramage & Ferguson, Ltd., Leith.
 Readhead, John, & Sons, South
 Shields.
 Rennie, G., & Co., London.
 Renoldson, J. P., & Sons, South
 Shields.
 Richardson, Wigham, & Co., New-
 castle-on-Tyne.
 Robertson, A. W., & Co., London.
 Rodger, A., & Co., Port-Glasgow.
 Russell & Co., Port-Glasgow.
 Scott & Co., Greenock.
 Scott, John, & Co., Kinghorn.
 Simons, William, & Co., Ltd., Ren-
 frew.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Swan, C. S., & Hunter, Ltd., New-
 castle-on-Tyne.
 Thornycroft, John I., & Co., London.
 Vickers, Sons & Maxim, Ltd., Bar-
 row-in-Furness.
 Workman, Clark & Co., Ltd., Belfast.
 Yarrow & Co., Ltd., London.

Ship-Jacks—Hydraulic—

Berry, Henry, & Co., Leeds.
 Fielding & Platt, Ltd., Gloucester.

Ship Sidelights—

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Stone, J., & Co., London.
 Utley, Thomas, & Co., Liverpool.

Ship's Telegraphs—

Baldwin, James, Keighley.
 Chadburn & Sons, Ltd., Liverpool.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Harrison Engine Co., Ltd., Man-
 chester.
 Siemens Brothers & Co., Ltd., London.

Ship's Ventilators—

(See Ventilating Apparatus.)

Ship's Water-Closets—

Blundell's London Copper and Brass
 Works, Ltd., London.
 Stone, J., & Co., London.

Shipyard Machine Tools—

(See Machine Tools.)

Shot and Shell—

(See Projectiles.)

Silk and Silk-Waste Machinery—

Brooks & Doxey, Ltd., Manchester.
 Curtis, Sons & Co., Manchester.
 Fairbairn, Naylor, Macpherson &
 Co., Ltd., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hacking & Co., Bury.
 Hall & Steljs, Keighley.
 Harding, Richardson, Rhodes & Co.
 Ltd., Leeds.
 Hetherington, John, & Sons Ltd.,
 Manchester.
 Holt, Thomas, Ltd., Rochdale.
 Lees, Asa, & Co., Ltd., Oldham.

Silk and Silk-Waste Machinery—cont.

Platt Brothers & Co., Ltd., Oldham.
 Smith, Prince, & Son, Keighley.
 Smith, William, & Brothers, Ltd.,
 Heywood.
 Taylor, Lang & Co., Ltd., Stalybridge.
 Wren, Henry, & Co., Manchester.

Sirens and Whistles—

Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Billington & Newton, Longport.
 Cran, John, & Co., Leith.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd.,
 London.
 Marchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Staly-
 bridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Pulsometer Engineering Co., Ltd.,
 London.
 Storey, Isaac, & Sons, Manchester.

Sizing Machinery—

(See Beaming, Warping and Sizing
 Machinery; also Textile Machinery.)

**Slipway (Ship-Repairing) Manu-
 facturers—**

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Carrick & Wardale, Gateshead-on-
 Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Kincaid, John G., & Co., Greenock.
 Morton, S. & H., & Co., Leith.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.

**Slipway (Ship-Repairing) Pro-
 prietors—**

Blackwood & Gordon, Port-Glasgow.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Inglis, A. & J., Glasgow.
 Rennoldson, J. P., & Sons, South
 Shields.
 Wallsend Slipway and Engineering
 Co., Ltd., Newcastle-on-Tyne.

Slotting and Shaping Machines—

Armstrong, Sir W. G., Whitworth &
 Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby
 Bridge.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Crookes, Roberts & Co., Sheffield.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ltd., Ashton-
 under-Lyne.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Man-
 chester.
 Noble & Lund, Felling-on-Tyne.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, G. F., Halifax.
 Smith & Coventry, Ltd., Manchester.

Slotting and Shaping Machines—*cont.*

Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Sludge Presses—

Ashton, Frost & Co., Ltd., Blackburn.
 Holroyd, Horsfield, & Wilson, Ltd.,
 Leeds.
 Manlove, Alliott & Co., Ltd., Notting-
 ham.

**Sluice-Valves, Cocks and
 Hydrants—**

(*See also Hydraulic Valves and Valves—
 Steam, Water, Gas.*)

Bailey, W. H., & Co., Ltd., Man-
 chester.
 Beck & Co., Ltd., London.
 Berry, Henry, & Co., Leeds.
 Billington & Newton, Longport.
 Carter, James, & Sons, Stalybridge.
 Charlesworth, S., & Co., Oldham.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Goodwin, Arnold, & Son, London,
 Hanna, Donald & Wilson, Paisley.
 Hall, John, & Son, Oldham.
 Lambeth Brass and Iron Co., Ltd.,
 London.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co.,
 Leeds.
 Marchant, G. M., Huddersfield.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Staly-
 bridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Simpson, James, & Co., Ltd., London.
 Stone, J., & Co., London.
 Waller, George, & Co., Stroud.
 Whitley Partners, Leeds.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.
 Woods, Hamilton, & Co., Ltd.,
 Manchester.

Small-Arms Machinery—

(*See Ordnance Machinery.*)

Smelting Furnaces—

(*See Furnace—Smelting, etc.*)

Smiths' Hearths—

Butler, J., & Co., Halifax.
 Douglass Brothers, Ltd., Blaydon-on-
 Tyne.
 Fraser, Douglas, & Sons, Arbroath.
 Hamer, S. H., Halifax.
 Moore, James, & Sons, Ltd., Belfast.
 Nasmyth, Wilson & Co., Ltd., Man-
 chester.
 Pease, Rhodes & Co., Ltd., Bradford.
 Thwaites Brothers, Ltd., Bradford.

Soap-Making Plant—

Daglish, Robert, & Co., St. Helens.
 Holroyd, Horsfield & Wilson, Ltd.,
 Leeds.
 Johnson, William, & Sons, Leeds.
 M'Kinnon, William, & Co., Aberdeen.
 M'Neil, John, & Co., Glasgow.
 Musgrave, John, & Son, Ltd., Bolton.
 Shepherd, Hill & Co., Ltd., Leeds.

**Spindles for Spinning Machines
 —Fly and Ring—**

Bodden, William, & Son, Oldham.
 Brooks & Doxey, Ltd., Manchester.
 Cook, Samuel, & Co., Bury.
 Dobson & Barlow, Ltd., Bolton.
 Dodd, Samuel, Oldham.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Proctor, Jonas, Bolton.
 Ryder, William, Bolton.
 Sykes, John, & Sons, Ltd., Hudders-
 field.
 White, W. B., Colne.

Spinning and Weaving Machinery—

(See Carpet-Making Machinery, Cotton Preparing and Spinning Machinery, Looms, Silk and Silk Waste Machinery, Textile Machinery, Woollen, Worsted and Waste Machinery.)

Stamping Machinery—

Bigwood, J., & Son, Wolverhampton.
Bridges, Thomas, & Sons, Wolverhampton.
Fielding & Platt, Ltd., Gloucester.
Greenwood & Batley, Ltd., Leeds.
Smith, Daniel, & Co., Wolverhampton
Wailes, George, & Co., London,

Spooling Machines—

Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.
Holroyd, John, & Co., Ltd., Rochdale.
Livesey, Henry, Ltd., Blackburn.
White, Thomas, & Sons, Paisley.
Wren, Henry, & Co., Manchester.

Stampings—

Billington & Newton, Longport.
Central Marine Engine Works, West Hartlepool.
Clarke, T. A. W., Leicester.
Douglass Brothers, Ltd., Blaydon-on-Tyne.
Frost & Sons, London.
Kirkstall Forge Co., Leeds.
Manganese Bronze and Brass Co., Ltd., London.
Phosphor Bronze Co., Ltd., London.
White, W. B., Colne.

Springs—

Adams, Thomas, Manchester.
Brown, John, & Co., Ltd., Sheffield.
Cammell, Charles, & Co., Ltd., Sheffield.
Cockburn, David, Glasgow.
Cockburn, George, & Co., Glasgow.
Cook, Samuel, & Co., Bury.
Fox, Samuel, & Co., Ltd., Sheffield.
Osborn, Samuel, & Co., Sheffield.
Turnbull, Alexander, & Co., Glasgow.
Turton, George, Platts & Co., Sheffield.
White, W. B., Colne.

Starch-Making Machinery—

Reid, Thomas, & Sons, Paisley.

Steam Cranes—

(See Cranes.)

Steam Engines—

(See Blowing Engines, Driving Engines, Haulage Engines, High-Speed Engines, Marine Engines, Portable Engines, Pumping Engines, Rolling Mill Engines, Traction Engines, Tramway Engines, Winding Engines.)

Stable and Cattle Fittings—

Hayward Brothers & Eckstein, Ltd., London.
Mather, Alex., & Son, Edinburgh.
St. Pancras Ironworks Co., Ltd., London.

Stamp and Drop Hammers—

Bigwood, J., & Son, Wolverhampton.
Clarke, T. A. W., Leicester.
Greenwood & Batley, Ltd., Leeds.
Nasmyth, Wilson & Co., Ltd., Manchester.
Smith, Daniel, & Co., Wolverhampton.

Steam Hammers—

(See Hammers—Steam.)

Steam Ploughs—

(See Ploughs—Steam.)

Steam Traps—*(See Traps—Steam.)***Steam Whistles—***(See Sirens and Whistles.)***Steel Forgings—***(See Forgings—Iron and Steel.)***Steel Founders—***(See Iron and Steel Founders.)***Steel and Iron Plates and Bars—**Bolton Iron and Steel Co., Ltd.,
Bolton.

Brown, John, & Co., Ltd., Sheffield.

Cammell, Charles, & Co., Ltd., Shef-
field.Darlington Forge Co., Ltd., Dar-
lington.

Jessop, Wm., & Sons, Ltd., Sheffield.

Kirkstall Forge Co., Leeds.

Leeds Forge Co., Ltd., Leeds.

Osborn, Samuel, & Co., Sheffield.

Palmer's Shipbuilding and Iron Co.,
Ltd., Jarrow-on-Tyne.Spencer, John, & Sons, Ltd., New-
castle-on-Tyne.Vickers, Sons & Maxim, Ltd., Shef-
field.**Steel and Iron Works Plant—continued.**

Davy Brothers, Ltd., Sheffield.

Fielding & Platt, Ltd., Gloucester.

Galloways, Ltd., Manchester.

Hanna, Donald & Wilson, Paisley.

Hetherington, John, & Sons, Ltd.,
Manchester.Jackson, P. R., & Co., Ltd., Man-
chester.

Pratt, F., & Co., Ltd., Halifax.

Scriven & Co., Leeds.

Shanks, Thomas, & Co., Johnstone.

Smith, Daniel, & Co., Wolverhampton.

Smith, Hugh, & Co., Glasgow.

Stevenson & Co., Ltd., Preston.

Thornton & Crebbin, Bradford.

Thwaites Brothers, Ltd., Bradford.

Walker Brothers, Wigan.

Winder Brothers, Ltd., Sheffield.

Worth, Mackenzie & Co., Ltd.,
Stockton-on-Tees.**Steel Slabs and Ingots—***(See Ingots; also Billets and Blooms.)***Steering Gear—Ships'—**

Alley & Maclellan, Glasgow.

Amos & Smith, Hull.

Bow, M'Lachlan & Co., Paisley.

Brown Brothers & Co., Ltd., Edin-
burgh.Clarke, Chapman & Co., Ltd., Gates-
head-on-Tyne.

Croom & Arthur, Leith.

Davis & Co., Ltd., London.

Dunston Engine Works Co., Dunston-
on-Tyne.Earle's Shipbuilding and Engineering
Co., Ltd., Hull.Fawcett, Preston & Co., Ltd., Liver-
pool.

Fisher & Co., Paisley.

Harfield & Co., Ltd., Blaydon-on-
Tyne.Harrison Engine Co., Ltd., Man-
chester.

Lester & Perkins, London.

Napier Brothers, Ltd., Glasgow.

Redpath & Paris, London.

Reid, Thomas, & Sons, Paisley.

Roger, R., & Co., Stockton-on-Tees.

Rogerson, John, & Co., Ltd., Wols-
ingham.**Steel and Iron Works Plant—**Abbot, John, & Co., Ltd., Gateshead-
on-Tyne.Armstrong, Sir W. G., Whitworth &
Co., Ltd., Manchester.Ashmore, Benson, Pease & Co., Ltd.,
Stockton-on-Tees.

Bennis, Edward, & Co., Ltd., Bolton.

Berry, Henry, & Co., Leeds.

Booth, Joseph, & Brothers, Leeds.

Brightside Foundry Co., Ltd., Shef-
field.

Buckton, Joshua, & Co., Ltd., Leeds.

Cowans, Sheldon & Co., Ltd., Carlisle.

Craven Brothers, Ltd., Manchester.

Crow, Harvey & Co., Glasgow.

Stereotyping Machinery—

Foster, Joseph, & Sons, Preston.
 Miller & Richard, Edinburgh.
 Taylor, Thomas, Leicester.

Stocks and Dies—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Muir, Wm., & Co., Ltd., Manchester.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.
 Widdowson, J. H., Manchester.

Stokers—Mechanical—

(See Mechanical Stokers.)

Stone-Breakers—

Dunston Engine Works Co., Dunston-on-Tyne.
 Fraser & Chalmers, Ltd., London.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Pegg, Samuel, & Son, Leicester.
 Richards, W., & Son, Leicester.

Stone-Working Machinery—

Abernethy, James, & Co., Aberdeen.
 Cole, T. & W., London.
 Death & Harris, Leicester.
 Henderson, John M., Aberdeen.
 Lee, Croll & Co., Lochee.
 M'Kinnon, William, & Co., Aberdeen.
 Smith, John, Keighley.
 Spencer, J., & Co., Keighley.
 Ward & Haggas, Keighley.

Stop-Valves—

Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Billington & Newton, Longport.
 Donkin, Bryan, & Co., Ltd., London.
 Fielding & Platt, Ltd., Gloucester.

Stop-Valves—*continued.*

Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd., London.
 Moorhouse, Sydney, & Co., Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pease, Rhodes & Co., Ltd., Bradford.
 Rice & Co., Leeds.
 Storey, Isaac, & Son, Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Structural Iron and Steel Work—

(See Bridges, Roofs, etc.)

Submarine Cables—

(See Cables.)

Suction-Draught Apparatus—

Brown, John, & Co., Ltd., Sheffield.

Sugar Machinery—

Abernethy, James, & Co., Aberdeen.
 Blake, Barclay & Co., Greenock.
 Bow, M'Lachlan & Co., Paisley.
 Campbell & Calderwood, Paisley.
 Clayton, Howlett & Co., London.
 Craig, A. F., & Co., Ltd., Paisley.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Davis & Primrose, Leith.
 Death & Harris, Leicester.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart, & Barclay, Ltd., Paisley.
 Kincaid, John G., & Co., Greenock.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marsden, John, & Son, Liverpool.
 Milne, James, & Son, Ltd., Edinburgh.
 Umpherston & Co., Ltd., Leith.
 Waygood, R., & Co., Ltd., London.

Superheaters—

Beeley, Thomas, Hyde.
 Bennis, Edward, & Co., Ltd., Bolton.
 Burnet, Lindsay, & Co., Glasgow.
 Craig, A. F., & Co., Ltd., Paisley.
 Daglish, Robert, & Co., St. Helens.
 Fraser & Chalmers, Ltd., London.
 Hick, Hargreaves & Co., Ltd., Manchester.
 Musgrave, John, & Son, Ltd., Bolton.
 Schofield & Taylor, Huddersfield.
 Simpson, James, & Co., Ltd., London.
 Sinclair, George, Leith.

Switches—Electric—

(See Electric Switch Boards; also Electric Light Plant and Fittings.)

Switches—Railway—

Kerr, Stuart & Co., Stoke-on-Trent.

Tanks—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Barracough, Joseph, & Sons, Barnsley.
 Bennis, Edward, & Co., Ltd., Bolton.
 Bertrams, Ltd., Edinburgh.
 Berry, John, Halifax.
 Bradley, R., & Co., Wakefield.
 Brightside Foundry Co., Ltd., Sheffield.
 Burnet, Lindsay, & Co., Glasgow.
 Calvert & Co., Huddersfield.
 Carmichael, James, & Co., Ltd., Dundee.
 Clayton, Son & Co., Ltd., Leeds.
 Coates, Victor, & Co., Ltd., Belfast.
 Cockburn, David, Glasgow.
 Craig, A. F., & Co., Ltd., Paisley.
 Crossley, George, Ltd., Cleckheaton.
 Daglish, Robert, & Co., St. Helens.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Douglas Forge Co., Ltd., Wigan.
 Dryden, Thomas, Preston.
 Edie, Henry, & Co., London.
 Eltringham, J. T., & Co., South Shields.

Tanks—continued.

Foster, Joseph, & Sons, Preston.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hanna, Donald & Wilson, Paisley.
 Hall, John, & Son, Oldham.
 Hawthorns & Co., Ltd., Leith.
 Heald, John, Chorley.
 Hodge, Samuel, & Sons, Ltd., London.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 M'Neil, John, & Co., Glasgow.
 Mechan & Sons, Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Pease, Rhodes & Co., Ltd., Bradford.
 Ritchie, Hart & Co., Ltd., Belfast.
 Rose, Downs & Thompson, Ltd., Hull.
 Simpson, James, & Co., Ltd., London.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Strang, Joseph, Ltd., Ramsbottom.
 Thornton & Crebbin, Bradford.
 Tinker, Shenton & Co., Hyde.
 West End Engine Works Co., Edinburgh.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Taps and Dies—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Holroyd, John, & Co., Ltd., Rochdale.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.
 Widdowson, J. H., Manchester.

Tapping Machines—*(See Boring and Tapping Machines.)***Tea-Dressing Machinery—**

Abernethy, James, & Co., Aberdeen.
 Clarke, T. A. W., Leicester.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Moreland, Richard, & Son, Ltd., London.
 Robin Hood Cycle Co., Ltd., Nottingham.

Telegraph Cables and Wires—*(See Cables.)***Telegraphic Apparatus for Ships—**

Brown Brothers & Co., Ltd., Edinburgh.
 Chadburn & Sons, Ltd., Liverpool.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Johnson & Phillips, Old Charlton.
 Mechan & Sons, Glasgow.
 Siemens Brothers & Co., Ltd., London.

Telegraphic Instruments and Land Line Materials—

Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Telephones—

Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Testing Machines—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Craven Brothers, Ltd., Manchester.
 Crow, Harvey & Co., Glasgow.
 Denison, Samuel, & Son, Leeds.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser, Douglas, & Sons, Arbroath.
 Greenwood & Batley, Ltd., Leeds.
 Smith, Hugh, & Co., Glasgow.
 Vauxhall Ironworks Co., Ltd., London.

Textile Machinery—*See also Sections undernoted:—*

Beaming, Warping and Sizing.
 Bleaching.
 Carpet Making.
 Cloth Finishing.
 Cloth Raising.
 Cotton Preparing and Spinning.
 Cotton Waste and Wadding.
 Dyeing.
 Flannelette Finishing.
 Flax, Hemp and Jute.
 Jacquard Looms.
 Lace.
 Linnenette Finishing.
 Looms.
 Rope, Twine and Braid.
 Silk and Silk Waste.
 Thread.
 Washing.
 Woollen, Worsted and Waste.

Arundel & Co., Stockport.
 Ashworth, Elijah, Manchester.
 Atherton Brothers, Ltd., Preston.
 Ayrton, William, & Co., Manchester.
 Blackburn, George, & Sons, Ltd., Nottingham.
 Bailey & Garnett, Ltd., Stalybridge.
 Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.
 Bodden, William, & Son, Oldham.
 Brooks & Doxey, Ltd., Manchester.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Clarke, T. A. W., Leicester.
 Cliffe & Co., Huddersfield.

Textile Machinery—continued.

Combe, Barbour & Combe, Ltd., Belfast.
 Cooke, W., Nottingham.
 Cooper Brothers, Ltd., Burnley.
 Cotton, Stephen, & Co., Belfast.
 Coulthard, T., & Co., Preston.
 Craig, A. F., & Co., Ltd., Paisley.
 Curtis, Sons & Co., Manchester.
 Dobson & Barlow, Ltd., Bolton.
 Dodd, Samuel, Oldham.
 Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser, Douglas, & Sons, Arbroath.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Greenwood & Battley, Ltd., Leeds.
 Hacking & Co., Bury.
 Hague, B., Nottingham.
 Haigh, John, & Sons, Ltd., Huddersfield.
 Hall & Stells, Keighley.
 Harding, Richardson, Rhodes & Co., Ltd., Leeds.
 Hattersley, G., & Sons, Ltd., Keighley.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holliday, Read, & Son, Ltd., Huddersfield.
 Holt, Thomas, Ltd., Rochdale.
 Horner, George, Belfast.
 Hosiery Machine Building Co., Nottingham.
 Houston & Hamilton, Belfast.
 Hutchinson, Hollingworth & Co., Ltd., Huddersfield, Dobcross, and Halifax.
 Jackson & Brother, Bolton.
 Jefferson, Joseph, & Brothers, Bradford.
 Keighley, George, Burnley.
 Kenworthy, Royston & Co., Huddersfield.
 Kiddier, J., & Son, Nottingham.
 Kilburn, R., & Sons, Leeds.
 Kitson, J., & Sons, Ltd., Bradford.
 Larmuth, Thomas, & Co., Manchester.
 Lawson, Samuel, & Sons, Leeds.
 Leach & Co., Rochdale.
 Lee, Croll & Co., Lochee.
 Lees, Asa, & Co., Ltd., Oldham.
 Livesey, Henry, Ltd., Blackburn.
 Low, James F., & Co., Monifieth.
 M'Gee, Walter, & Son, Paisley.
 Mason, John, Rochdale.
 Miller, Moses, & Sons, Ltd., Nottingham.

Textile Machinery—continued.

Nottingham Engineering Co., Ltd., Nottingham.
 Parker, Charles, Sons & Co., Dundee.
 Parkinson, J., Shipley.
 Pegg, Samuel, & Son, Leicester.
 Pemberton & Co., Burnley.
 Petrie, John, Jun., Ltd., Rochdale.
 Pilling, John, & Sons, Ltd., Colne.
 Platt Brothers & Co., Ltd., Oldham.
 Proctor, Jonas, Bolton.
 Ramsden Brothers, Keighley.
 Ratcliffe, J., & Sons, Leeds.
 Reynolds, James, & Co., Belfast.
 Richardson, Tuer & Co., Manchester.
 Riley, J. H., & Co., Bury.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robertson & Orchar, Ltd., Dundee.
 Robinson, Joseph, & Co., Manchester.
 Robinson, William, & Son, Oldham.
 Ryder, Thomas, & Son, Bolton.
 Shorrock, J. & R., Darwen.
 Smith, Prince, & Son, Keighley.
 Smith, William, & Brothers, Ltd., Heywood.
 Strang, Joseph, Ltd., Ramsbottom.
 Stubbs, Joseph, Manchester.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Tatham, William, & Co., Rochdale.
 Taylor, Lang & Co., Ltd., Stalybridge.
 Taylor, Thomas, Leicester.
 Taylor, Wordsworth & Co., Leeds.
 Thonison, Son & Co., Dundee.
 Tomlinson, G. W., Huddersfield.
 Tomlinson, James (Rochdale), Ltd., Rochdale.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Walker, Samuel, Manchester.
 White, Thomas, & Sons, Paisley.
 White, W. B., Colne.
 Whiteley, William, & Sons, Ltd., Huddersfield.
 Wren, Henry, & Co., Manchester.

Thread Machinery—

Ayrton, William, & Co., Manchester.
 Brooks & Doxey, Ltd., Manchester.
 Holt, Thomas, Ltd., Rochdale.
 M'Gee, Walter, & Son, Paisley.
 White, Thomas, & Sons, Paisley.
 Wren, Henry, & Co., Manchester.

Time-Checking Machines—

Bailey, W. H., & Co., Ltd., Manchester.
Keighley Electrical Engineering Co., Ltd., Keighley.

Tinplate Working Machinery—

(See Machine Tools.)

Tip-Waggons—

Henderson, John M., Aberdeen.
Johnson, William, & Sons, Leeds.
Kerr, Stuart & Co., Stoke-on-Trent.

Tobacco Machinery—

Coates, Victor, & Co., Ltd., Belfast.
Cole, T. & W., London.
Davis & Primrose, Leith.
Eclipse Machine Co., Ltd., Oldham.
Greig, John, & Sons, Edinburgh.
Houston & Hamilton, Belfast.
Luke & Spencer, Ltd., Manchester.
Marsden, John, & Son, Liverpool.
Middleton, Robert, Leeds.

Tools—Hand and Small—

Feather, George R., Bolton.
Firth, Thomas, & Sons, Ltd., Sheffield.
Herbert, E. G., Manchester.
Smith, Daniel, & Co., Wolverhampton.
Whiteley's Acme Cycle Co., Ltd., Leeds.

Tools—Machine—

(See Machine Tools.)

Tools—Steel—

Allen, Edgar, & Co., Ltd., Sheffield.
Bolton Iron and Steel Co., Ltd., Bolton.
Brown, John, & Co., Ltd., Sheffield.

Tools—Steel—continued.

Cammell, Charles, & Co., Ltd., Sheffield.
Jessop, Wm., & Sons, Ltd., Sheffield.
Osborn, Samuel, & Co., Sheffield.
Owen, Brazil & Holborow, Sheffield.
Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
Turton, George, Platts & Co., Sheffield.
Winder Brothers, Ltd., Sheffield.
Woodhouse & Rixson, Sheffield.

Torpedo Boats—as a Specialty—

Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Hanna, Donald & Wilson, Paisley.
Laird Brothers, Birkenhead.
Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
Thornycroft, John I., & Co., London.
Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
Yarrow & Co., Ltd., London.

Torpedo-Boat Destroyers—as a Specialty—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
Doxford, W., & Sons, Ltd., Sunderland.
Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Hanna, Donald & Wilson, Paisley.
Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
Laird Brothers, Birkenhead.
Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
Thornycroft, John I., & Co., London.
Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
Yarrow & Co., Ltd., London.

Torpedos and Torpedo Gear—

Cammell, Charles, & Co., Ltd., Sheffield.
Firth, Thomas, & Sons, Ltd., Sheffield.
Greenwood & Batley, Ltd., Leeds.

Traction Engines—

Fowler, John, & Co. (Leeds), Ltd.,
Leeds.
M'Laren, J. & H., Leeds.
Mann & Charlesworth, Leeds.
Marshall, Sons & Co., Ltd., Gains-
borough.

Tramway Engines and Plant—

Beyer, Peacock & Co., Ltd., Man-
chester.
Brown Brothers & Co., Ltd., Edin-
burgh.
Greenwood & Batley, Ltd., Leeds.
Kerr, Stuart & Co., Stoke-on-Trent.
Wilkinson, Wm., & Co., Ltd., Wigan.

Transformers—Electric—

(See Electric Transformers.)

Traps—Steam—

Bailey, W. H., & Co., Ltd., Man-
chester.
Carter, James, & Sons, Stalybridge.
Cole, T. & W., London.
Crowley, John, & Co., Ltd., Sheffield.
Eastwood, Walter, Ashton-under-
Lyne.
Edmeston, Archd., & Sons, Manchester.
Empire Engineering Co., Manchester.
Feather, George R., Bolton.
Fletcher Brothers, Ashton-under-
Lyne.
Haigh, W. B., & Co., Oldham.
Holden & Brooke, Ltd., Manchester.
Lambeth Brass and Iron Co., Ltd.,
London.
Lancaster & Tonge, Ltd., Manchester.
Marchant, G. M., Huddersfield.
Moorhouse, Sydney, & Co., Staly-
bridge.
Moorhouse, Walter, & Co., Staly-
bridge.
Oldham, Alexander, & Sons, Dukin-
field.
Oldroyd, Edwin, & Co., Ltd., Leeds.
Pease, Rhodes & Co., Ltd., Bradford.
Richardson, Thomas, & Sons, Ltd.,
Hartlepool.

Traps—Steam—continued.

Ritchie, Hart & Co., Ltd., Belfast.
Saxon, George, Manchester.
Schofield & Taylor, Huddersfield.
Sharples, William, & Co., Rams-
bottom.
Storey, Isaac, & Sons, Manchester.
Strang, Joseph, Ltd., Ramsbottom.
Thornycroft, John I., & Co., London.
Turnbull, Alexander, & Co., Glasgow.
Urmsom & Thompson, Oldham.
West End Engine Works Co., Edin-
burgh.
Whitley Partners, Leeds.

Travelling Cranes—

(See Cranes.)

**Trawlers—Steam—as a
Specialty—**

Caledon Shipbuilding and Engineering
Co., Ltd., Dundee.
Earle's Shipbuilding and Engineering
Co., Ltd., Hull.
Hall, A., & Co., Aberdeen.
Hall, Russell & Co., Ltd., Aberdeen.
Hanna, Donald & Wilson, Paisley.
Hawthorns & Co., Ltd., Leith.
Jones, John, & Sons, Liverpool.
Lobnitz & Co., Ltd., Renfrew.
Mackie & Thomson, Glasgow.
North-Eastern Marine Engineering
Co., Ltd., Sunderland.
Rennoldson, J. P., & Sons, South
Shields.
Scott, John, & Co., Kinghorn.

Trucks, Trolleys, Barrows, etc.

Coubro & Scruton, London.

Tube Expanders—

Cole, T. & W., London.

Tube and Rod Drawing Plant—

Berry, Henry, & Co., Leeds.
 Crossley, George, Ltd., Cleckheaton.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Fielding & Platt, Ltd., Gloucester.
 Middleton, Robert, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Smith, Daniel, & Co., Wolverhampton.

Tubes—Brass and Copper—

Elmore's Copper Depositing Co., Ltd.,
 Leeds.
 Frost & Sons, London.
 Manganese Bronze and Brass Co.,
 Ltd., London.
 Phosphor Bronze Co., Ltd., London.

Tubes—Iron and Steel—

Brown, John, & Co., Ltd., Sheffield.
 Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd.,
 London.

Tug Boats—Steam—

Barclay, Curle & Co., Ltd., Glasgow.
 Cran, John, & Co., Leith.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Eltringham, J. T., & Co., South
 Shields.
 Fleming & Ferguson, Ltd., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 Lobnitz & Co., Ltd., Renfrew.
 M'Kie & Baxter, Glasgow.
 Mackie & Thomson, Glasgow.
 Ramage & Ferguson, Ltd., Leith.
 Rennoldson, J. P., & Sons, South
 Shields.
 Robertson, A. W., & Co., London.
 Scott & Co., Greenock.
 Stewart, John, & Co., Ltd., London.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Thornycroft, John I., & Co., London.
 Vauxhall Ironworks Co., Ltd., Lon-
 don.
 Vickers, Sons & Maxim, Ltd., Bar-
 row-in-Furness.
 Yarrow & Co., Ltd., London.

Turbines—

Carrick & Ritchie, Edinburgh.
 Cran, John, & Co., Leith.
 Fraser & Chalmers, Ltd., London.
 Greenwood & Batley, Ltd., Leeds.
 Günther, W., & Sons, Oldham.
 Gwynne & Co., London.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Moreland, Richard, & Son, Ltd., Lon-
 don.
 Parsons, C. A., & Co., Newcastle-on-
 Tyne.
 Sharples, William, & Co., Rams-
 bottom.
 Thomson, Son & Co., Dundee.

Turntables—

Brightside Foundry Co., Ltd., Shef-
 field.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Hanna, Donald & Wilson, Paisley.
 Johnson, William, & Sons, Leeds.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Larmuth, Thomas, & Co., Man-
 chester.
 Mechan & Sons, Glasgow.
 St. George's Ironworks, Ltd., Man-
 chester.
 Taylor & Hubbard, Leicester.

Turret Clocks—

Bailey, W. H., & Co., Ltd., Man-
 chester.

Twine Machinery—

(See *Rope, Twine and Braid
 Machinery.*)

Twist Drill Grinders—

Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendall & Gent, Manchester.
 Lang, John, & Sons, Johnstone.
 Luke & Spencer, Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.

Twist Drills—

Holroyd, John, & Co., Ltd., Rochdale.
 Muir, Wm., & Co., Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.

Tyres—Cycle—

(See Cycles and Cycle Parts.)

Tyres—Railway—

(See also Railway Plant.)

Bolton Iron and Steel Co., Ltd.,
 Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Shef-
 field.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Fox, Samuel, & Co., Sheffield.
 Vickers, Sons & Maxim, Ltd., Shef-
 field.

Umbrella Frames—

Fox, Samuel, & Co., Sheffield.

Vacuum Pumps and Apparatus

Allen, Harrison & Co., Manchester.
 Blake, Barclay & Co., Greenock.
 Browett, Lindley & Co., Ltd., Patri-
 croft.
 Calvert & Co., Huddersfield.
 Carrick & Wardale, Gateshead-on-
 Tyne.
 Fawcett, Preston & Co., Ltd., Liver-
 pool.
 Foster, Joseph, & Sons, Preston.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Notting-
 ham.
 Pulsometer Engineering Co., Ltd.,
 London.
 Strang, Joseph, Ltd., Ramsbottom.

**Valves and Cocks—Steam,
 Water, Gas—**

(See also Reducing Valves, Relief Valves,
 Safety Valves, Stop Valves.)

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Adams, Thomas, Manchester.
 Adamson, Daniel, & Co., Dukinfield.
 Alley & Maclellan, Glasgow.
 Arrol, Sir William, & Co., Ltd.,
 Glasgow.
 Bailey, W. H., & Co., Ltd., Man-
 chester.
 Baldwin, James, Keighley.
 Berry, John, Halifax.
 Beck & Co., Ltd., London.
 Beeley, Thomas, Hyde.
 Berry, Henry, & Co., Leeds.
 Billington & Newton, Longport.
 Calvert & Co., Huddersfield.
 Carter, James, & Sons, Stalybridge.
 Clark, J. & T., Bradford.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Cockburn, David, Glasgow.
 Cockburn, George, & Co., Glasgow.
 Dewrance & Co., London.
 Donkin, Bryan, & Co., Ltd., London.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Eastwood, Walter, Ashton-under-Lyne.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-
 Lyne.
 Frost & Sons, London.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Galloway, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Hall, John, & Son, Oldham.
 Hanna, Donald & Wilson, Paisley.
 Holroyd, Horsfield & Wilson, Ltd.,
 Leeds.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Lambeth Brass and Iron Co., Ltd.,
 London.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co.,
 Leeds.
 Madan, Charles S., & Co., Manches-
 ter.
 Manganese Bronze and Brass Co.,
 Ltd., London.
 Marchant, G. M., Huddersfield,

Valves and Cocks—Steam, Water, Gas
—continued.

Marsden, John, & Son, Liverpool.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Musgrave Brothers, Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pearn, Frank, & Co., Ltd., Manchester.
 Pease, Rhodes & Co., Ltd., Bradford.
 Remington, T. W., & Co., London.
 Ross, R. G., & Son, Glasgow.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Simpson, James, & Co., Ltd., London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Turnbull, Alexander, & Co., Glasgow.
 Urmson & Thompson, Oldham.
 Wailes, George, & Co., London.
 Waller, George, & Co., Stroud.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 West's Gas Improvement Co., Ltd., Manchester.
 Whitley Partners, Leeds.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Ventilating Apparatus—

(See **Heating and Ventilating Apparatus, Fans, and Mine Ventilation Plant.**)

Browett, Lindley & Co., Ltd., Patricroft.
 Bumsted & Chandler, Hednesford.
 Donkin, Bryan, & Co., Ltd., London.
 Dougill, Alf., & Co., Ltd., Leeds.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Haswell, J. Stenson, & Co., Leicester.
 Marsden, John, & Son, Liverpool.

Ventilating Apparatus—continued.

Mechan & Sons, Glasgow.
 Pease, Rhodes & Co., Ltd., Bradford.
 Storey, Isaac, & Sons, Manchester.
 Thwaites Brothers, Ltd., Bradford.
 Turton, George, Platts & Co., Sheffield.
 Utley, Thomas, & Co., Liverpool.
 Walker Brothers, Wigan.

Vice Makers—

Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.

Vulcanizing Plant—

Galloways, Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Robinson, Joseph, & Co., Manchester.

Wadding Machinery—

(See **Cotton Waste and Wadding Machinery; also Woollen, Worsted and Waste Machinery.**)

Waggons—Railway—

(See **Railway Plant.**)

Waggons—Tip—

(See **Tip-Waggons.**)

Warping Machinery—

(See **Beaming and Warping Machinery; also Textile Machinery.**)

Washers—

(See **Bolts, Nuts, Rivets, Screws and Washers.**)

Washing Machinery—**Coal—**

Fraser & Chalmers, Ltd., London.
Hodgson, H. E., & Co., Cleckheaton.

Laundry—

Ashwell & Nesbit, Ltd., London and Leicester.
Benham & Sons, Ltd., London.
Manlove, Alliott & Co., Ltd., Nottingham.

Ore—

Fraser & Chalmers, Ltd., London.

Textile—

Downham, John, & Co., Bury.
Edmeston, Archd., & Sons, Manchester.
Farmer, Sir James, & Sons, Ltd., Manchester.
Fraser, Douglas, & Sons, Arbroath.
Jackson & Brother, Bolton.
Jardine, John, Nottingham.
Kenworthy, Royston & Co., Huddersfield.
McNaught, John & William, Rochdale.
Pegg, Samuel, & Son, Leicester.
Petrie, John, Jun., Ltd., Rochdale.
Riley, J. F., Huddersfield.
Robinson, Joseph, & Co., Manchester.
Stead Brothers, Halifax.
Taylor, Wordsworth & Co., Leeds.
Thomson, Son & Co., Dundee.
Walker, Samuel, Manchester.

Water Closets—Ships'—

(See Ships' Water Closets.)

Water Meters—

Beck & Co., Ltd., London.
Goodwin, Arnold, & Son, London.

Water Pipes—

(See Pipes.)

Water Purification and Softening Apparatus—

Gimson & Co. (Leicester), Ltd.,
Leicester.
Pope, W., & Son, Ltd., London.
Thwaites Brothers, Ltd., Bradford.

Water-Tube Boilers—

(See Boilers—Steam.)

Water Wheels—

Abernethy, James, & Co., Aberdeen.
Bailey, W. H., & Co., Ltd., Manchester.
Barry, Henry, & Co., Ltd., Aberdeen.
Carrick & Ritchie, Edinburgh.
Clark, J. & T., Bradford.
Coates, Victor, & Co., Ltd., Belfast.
Daglish, Robert, & Co., St. Helens.
Davis & Primrose, Leith.
Death & Harris, Leicester.
Dryden, Thomas, Preston.
Fawcett, Preston & Co., Ltd., Liverpool.
Fraser & Chalmers, Ltd., London.
Gimson & Co. (Leicester), Ltd.,
Leicester.
Hanna, Donald & Wilson, Paisley.
Hind & Lund, Ltd., Preston.
Holroyd, Horsfield & Wilson, Ltd.,
Leeds.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Jackson & Brother, Bolton.
Kerr, Stuart & Co., Stoke-on-Trent.
Lees, Anderson & Co., Glasgow.
M'Neil, John, & Co., Glasgow.
Mather, Alex., & Sons, Edinburgh.
Mechan & Sons, Glasgow.
Milne, James, & Son, Ltd., Edinburgh.
Saxon, George, Manchester.
Sharples, William, & Co., Ramsbottom.
Thomson, Son & Co., Dundee.
Waygood, R., & Co., Ltd., London.
Whitaker, C., & Co., Bradford.
Wren, Henry, & Co., Manchester.

Weaving Machinery—

(See Looms; also Textile Machinery.)

Weighing Machinery—

Denison, Samuel, & Son, Leeds.
Spencer, James, & Co., Manchester.
Walker, Eaton & Co., Sheffield.

Well-Sinking and Boring Machinery—

Carrick & Wardale, Gateshead-on-Tyne.
 Evans, Joseph, & Sons, Wolverhampton.
 Matthews, William, & Co., Manchester.
 Saxon, George, Manchester.
 Walmsley, Charles, & Co., Ltd., Bury.

Wheel and Axle Makers—

(See Axles; also Railway Plant.)

Wheel-Cutting Machinery—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Atlas Engineering Co., Manchester.
 Birch, G., & Co., Manchester.
 Butler, J., & Co., Halifax.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Kendal & Gent, Manchester.
 Lang, John, & Son, Johnstone.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Scott & Hodgson, Manchester.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Stirke, John, & Sons, Halifax.
 Wilkinson, G., & Sons, Keighley.

Wheel Cutting ("To the Trade")—

Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Bailey & Garnett, Ltd., Stalybridge.
 Barlow, H. B., & Co., Manchester.
 Birch, G., & Co., Manchester.
 Darling & Sellers, Ltd., Keighley.

Wheel Cutting—"To the Trade")—cont.

Gibson, J., & Co., Leeds.
 Hodgson, H. E., & Co., Cleckheaton.
 Hutchinson, Hollingworth & Co., Ltd., Dobcross.
 Jackson, P. R., & Co., Ltd., Manchester.
 Lang, John, & Sons, Johnstone.
 Mayes, John, London.
 Parkinson, J., Shipley.
 Scott & Hodgson, Manchester.
 Smith & Coventry, Ltd., Manchester.
 Whittaker, William, & Sons, Oldham.

Wheel-Moulding Machines—

Buckley & Taylor, Oldham.
 Craven Brothers, Ltd., Manchester.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Whittaker, William, & Sons, Oldham.

Wheels—Geared, Machine Moulded, Fly, etc—

(See Mill Gearing, Shafting and Shaft Fittings.)

Whistles—Steam—

(See Sirens and Whistles.)

Winches—Steam—

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crook, Thomas T., Bolton.
 Good & Menzies, Hull.
 Roger, R., & Co., Stockton-on-Tees.
 Stewart, John, & Son, Ltd., London.

Winding Engines and Machinery

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Barraclough, Joseph, & Sons, Barnsley.
 Booth, Joseph, & Brothers, Leeds.
 Bradley, R., & Co., Wakefield.

**Winding Engines and Machinery—
—continued.**

Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Crook, Thomas T., Bolton.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Death & Harris, Leicester.
 Douglas Forge Co., Ltd., Wigan.
 Entwistle & Gass, Ltd., Bolton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Fleming & Ferguson, Ltd., Paisley.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Heald, John, Chorley.
 Henderson, John M., Aberdeen.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kenworthy, Taylor & Co., Barnsley.
 Leeds Engineering and Hydraulic Co., Leeds.
 M'Kie & Baxter, Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.
 Pullan & Mann, Leeds.
 St. George's Ironworks, Ltd., Manchester.
 Simpson, James, & Co., Ltd., London.
 Saxon, George, Manchester.
 Scott & Hodgson, Manchester.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Ramsbottom.

**Winding Engines and Machinery—
—continued.**

Stevenson & Co., Ltd., Preston.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Walmsley, Charles, & Co., Ltd., Bury.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Wood, John & Edward, Bolton.
 Worsley Mesnes Iron Works Co., Wigan.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Winding Machinery—

(See Textile Machinery.)

Windlasses—Steam and Hand—

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Dryden, Thomas, Preston.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Emerson, Walker & Thompson Brothers, Ltd., Gateshead-on-Tyne.
 Fisher & Co., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Harfield & Co., Ltd., Blaydon-on-Tyne.
 Henderson, John M., Aberdeen.
 Napier Brothers, Ltd., Glasgow.
 Reid, Thomas, & Sons, Paisley.

Wire and Wire Rope—

Cammell, Charles, & Co., Ltd., Sheffield.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fox, Samuel, & Co., Sheffield.
 Phosphor Bronze Co., Ltd., London.

Wire Drawing Plant—

Crossley, George, Ltd., Cleckheaton.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Hamer, S. H., Halifax.
 Harding, Richardson, Rhodes & Co.,
 Ltd., Leeds.
 Hodgson, H. E., & Co., Cleckheaton.
 Wren, Henry, & Co., Manchester.

Wire-Working Machinery—

Birch, G., & Co., Manchester.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Glover, M., & Co., Leeds.
 Hamer, S. H., Halifax.
 Hattersley, George, & Sons, Ltd.,
 Keighley.
 Hodgson, H. E., & Co., Cleckheaton.
 Kitson, J., & Sons, Ltd., Bradford.

Wood-Working Machinery—

Birch, P., & Co., Manchester.
 Clarke, T. A. W., Leicester.
 Cole, T. & W., London.
 Dickinson, John, & Co., Keighley.
 Entwistle & Gass, Ltd., Bolton.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Luke & Spencer, Ltd., Manchester.
 M'Dowall, John, & Sons, Johnstone.
 Sagar, J., & Co., Halifax.
 White, Thomas, & Sons, Paisley.

Woollen, Worsted and Waste Machinery—

Atherton Brothers, Ltd., Preston.
 Brooks & Doxey, Ltd., Manchester.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Cliffe & Co., Huddersfield.
 Crossley, John, & Co., Halifax.
 Curtis, Sons & Co., Manchester.
 Dobson & Barlow, Ltd., Bolton.
 Hacking & Co., Bury.
 Haigh, John, & Sons, Ltd., Huddersfield.

Woollen, Worsted and Waste Machinery—continued.

Hall & Stells, Keighley.
 Harding, Richardson, Rhodes & Co.,
 Ltd., Leeds.
 Hattersley, George, & Sons, Ltd.,
 Keighley.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Holt, Thomas, Ltd., Rochdale.
 Hoyle & Preston, Keighley.
 Hutchinson, Hollingworth & Co.,
 Ltd., Huddersfield.
 Jefferson, Joseph, & Brothers, Brad-
 ford.
 Kenworthy, Royston & Co., Hudders-
 field.
 Kilburn, R., & Sons, Leeds.
 Leach & Co., Rochdale.
 Lees, Asa, & Co., Ltd., Oldham.
 McNaught, John & William, Rochdale.
 Petrie, John, Jun., Ltd., Rochdale.
 Platt Brothers & Co., Ltd., Oldham.
 Ramsden Brothers, Keighley.
 Ratcliffe, J., & Sons, Leeds.
 Smith, Prince, & Son, Keighley.
 Smith, William, & Brothers, Ltd.,
 Manchester.
 Stubbs, Joseph, Manchester.
 Sykes, John, & Sons, Ltd., Hudders-
 field.
 Tatham, William, & Co., Rochdale.
 Taylor, Lang & Co., Ltd., Staly-
 bridge.
 Taylor, Wordsworth & Co., Leeds.
 Whiteley, William, & Sons, Ltd.,
 Huddersfield.
 White, W. B., Colne.

Yacht Builders—

(See Shipbuilders; also Launches and
 Yachts.)

Yarn-Preparing Machinery—

(See Woollen, Worsted and Waste
 Machinery; also Textile Machinery.)

Zinc-Working Machinery—

(See Machine Tools.)



The Engineering Employers' Federation.

SUPPLEMENTARY LIST OF MEMBERS.

No. 1

N.B.—This List contains the Names of the new Members admitted during 1899 and January—July, 1900.

It should be consulted along with original List of Federated E. & S. Employers issued in December, 1898.

(ARRANGED IN ALPHABETICAL ORDER.)

THE ENGINEERING EMPLOYERS' FEDERATION,
105 WEST GEORGE STREET, GLASGOW.

August, 1900.

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).		TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
		ADDRESS (STREET, ETC.).				
Airdrie Iron Co.,	Engineers, Ironfounders, Boilermakers	Airdrie Iron Works	...	Airdrie	Iron, Airdrie	6 Airdrie
Akroyd, William	Ironfounder	New Bank	...	Halifax	...	57
Alder & Mackay	Brassfounders	Gorgie Road	...	Edinburgh	Alder, Edinburgh	81 Western
Allen, James	Hosiery Accessories Maker	Parkinson Street...	...	Nottingham	...	81
Anderson & Co.	Ironfounders	...	...	Musselburgh	Foundry, Musselburgh	28A
Anderton, Alfred, & Sons	Boilermakers	Antley Boiler Works	...	Accrington	Boiler, Church	136
Archdale, James, & Co.	Machine Toolmakers	Ledsam Street	...	Birmingham	Archdale, Birmingham	3558
Baldwin, Samuel	Engineer, Hoistmaker, Millwright, etc.	Bethesda Works	Street	Iron	Burnley	154 National
Balmforth Bros., Ltd.	Engineers and Cranemakers, etc., etc.	Peelings Foundry	...	Rodley, near Leeds	Baldwin, Engineer, Burnley Balmforth, Rodley	36 Stan-ningley.
Beath & Keay ...	Ironfounders and Millwrights	Albion Foundry	...	Dundee	...	412
Bennie, John, & Sons	Brassfounders	...	...	Waverley	Brassworks, Edinburgh	...
Bell, Charles	Engineer	...	...	56 Fountainbridge	56 Fountainbridge	...
Belliss & Morcom, Ltd. (Late G. E. Belliss & Co., Ltd.)	Engineers	...	...	Bath Street, Leeds Road	Leeds Road	Ironer, Bradford
Billings, M., & Son	Ironfounders	...	...	Ledsam Street Works	...	Belliss, Birmingham
Blair & Wheater	Machine Toolmakers	...	...	Causeway Lane	...	Leicester
Billings, T. & W.	Ironfounders	...	...	Tyne Tool Works	...	Billings, Leicester
				Wallsend-on-Tyne	...	Wallsend-on-Tyne
				Ironfounders	...	...

Britannia Co., The	... ...	Engineers, Toolmakers, and Ironfounders	Britannia Works	... Colchester	... Britannia, Colchester	47 National
Broadfoot, John, & Sons	... ...	Engineers and Brassfounders	Inchholm Works, White-inch	... Glasgow	... Broadfoot	... 103 Hillhead
Bromilow, John	... ...	Brass and Aluminium Founder and Finisher	William Street Brass and Aluminium Works	... Heywood	... Brass, Heywood	1129
Brookfield Foundry Co., The	... ...	Engineers and Ironfounders	St. Mary's Street	... St. Helens	... ...	52
Brook, Henry, & Co., Ltd.	..	Ironfounders	Colne Road	... Huddersfield	... ...	247
Brown, David, & Sons	... ...	Patternmakers and Gear Cutters	East Parade	... Huddersfield	Gearing, Huddersfield	80
Buchanan, James, & Co.	... ...	Brassfounders	... ...	... Edinburgh	... ...	...
Buchanan, James, & Son	... ...	Engineers and Ironfounders	Victoria Brass Foundry, 236 Leith Walk	... Liverpool	Buchanan, Liverpool	132 Bootle
Bull's Metal and Melloid Co., Ltd.	... ...	Bronze and Brass Manufacturers	Caledonia Foundry, 105 Brasenose Road	... London, E.C.	Melloid, London	4378
Burrell, Chas., & Sons, Ltd.	... ...	Traction Engine Manufacturers	6 Jeffrey's Square, St. Mary Axe	... Thetford, Norfolk	Burrell, Thetford	...
Catton & Co., Ltd.	... ...	Steel Castings Manufacturers	... ...	Leeds	Cattons, Leeds	561
Chadwick Machine Co., Ltd., The	... ...	Machine Makers	Hunslet	... ...	Chadwick, Cleckheaton, Yorks.	83
Chatwin, Thomas	... ...	Engineers' Tool Manufacturer	High Street Mills	... ...	Chatwin, Birmingham	...
Chester, Edward, & Co., Ltd.	... ...	Engineers and Boilermakers	... ...	... ...	... ...	...
Clayton Engineering and Electrical Construction Co., Ltd., The	... ...	Electrical and General Engineers	Victoria Works, Great Tindal Street	... Renfrew	Dynamo, Hyde	62 Hyde
Clayton & Shuttleworth	... ...	General Engineers and Thrashing Machine Manufacturers	Newton, Hyde	... Nr. Manchester	... Claytons, Lincoln	43 National
		Stamp End Works	... Lincoln	... Lincoln	... Claytons, Lincoln	...

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).				TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
				
Clifton & Waddell	Machine Toolmakers	...	...	...	...	Johnstone	...	...
Cooper & Greig	Engineers and Boilermakers	...	Britannia Works, East Dock Street	Dundee	Condenser, Dundee	566	...	...
Cowan, W. & B., Ltd.	Gas Meter Manufacturers	...	Buccleuch Street Works	Edinburgh	Disc, Edinburgh	753	...	...
Crabtree & Co....	Marine Engineers, Iron and Brass	Southtown Ironworks	...	Great Yarmouth	Crabtree, Yarmouth	46	...	...
Craven, Edward, & Co.	Founders	30 Dewsbury Road	...	Leeds	...	...	...	1703
Croft & Perkins ...	Steel Founders	...	Great Northern Works, Leeds Road	Bradford	Pulleys, Bradford	349	...	...
Crossley Bros., Ltd.	Engineers, Millwrights, and Iron	...	Openshaw	Manchester	Crossleys, Openshaw	419	...	...
Cunliffe & Croom, Ltd.	Founders	...	...	...	...	...	...	...
	Manufacturers of Gas Engines, Pumps, etc.	...	Broughton Ironworks	Manchester	Lathé, Manchester	1886	...	...
Davey, Paxman, & Co., Ltd.	Engineers and Boilermakers	...	Standard Iron Works	...	Colchester	52	...	...
Deighton Patent Flue and Tube Co., Ltd., The	Manufacturers of Corrugated Steel Furnaces for Marine and Land Boilers	Pepper Road	...	Leeds	Flues, Leeds	1674	...	...
Dewhurst, Andrew	Boilermaker	...	...	...	...	...	...	...
Dove, James, & Co.	General Engineers	...	Victoria Boiler Works, Bridge Street	Blackburn	Dewhurst, Boiler, Church,	71 West-minster	...	...
Drake & Gorham	Electrical, Mechanical, and Hydraulic Engineers	...	18 Greenside Lane, Leith Walk	Edinburgh	Accumulator, London	...	...	...
Drake, Jonas, & Son	Engineers and Ironfounders (Gas)	...	66 Victoria Street, Westminster, Ovenden	London, S. W.	Drakeson	43	...	...
Dunn, Alex., & Son	Ironfounders	...	...	Halifax	Piercy Street Foundry, Manchester	1502	...	...

Electric Construction Co., Ltd., The	Electrical Engineers ...	... ,	Bushbury Engineering ... Works	Wolverhampton	Electric, Wolverhampton	75
Electromotors, Limited	Manufacturers of Electric Motors etc.	... ,	Tomlinson Street, Hulme	Manchester ...	Magnet, Manchester	4442
Empsall, W. H.	Brassfounder and Finisher ...	... ,	25 Nelson Street ...	Bradford ...	... , ...	1437
Ewen & Mitton,	General Engineers ...	... ,	Smithfield Works, Sherlock Street	Birmingham ...	Method, Birmingham	1402
Ewing & Lawson	Boilermakers and Engineers	... ,	Crownpoint Boiler Works, Crownpoint Road, and St. Marnock Street, Mile-End	Glasgow ...	Diameter, Glasgow	2597
Fairfield Shipbuilding and Engineering Co., Ltd., The	Engineers and Shipbuilders	... ,	...	...	Fairfield ...	...
Falcon Iron Works, Ltd., The (formerly John Wild & Co., Ltd.)	Colliery Engineers ...	... ,	Falcon Iron Works ...	Govan, near Glasgow	...	557 Royal 59 Govan
Farrar, James	Wood Turner and Patternmaker	... ,	...	Oldham ...	Falcon, Oldham	352
Feather, William, & Co.	Toolmakers ...	... ,	Emmitt's Court, Gaol Lane	Halifax ...	... , ...	...
Ferguson & Co.	Ironfounders ...	... ,	Hope Street ...	Halifax ...	... , ...	...
Fieldhouse, Crossfield & Co., Ltd.	Printers' Engineers ...	... ,	Short Street ...	Leicester ...	... , ...	746
Foden, Edwin, Sons, & Co., Ltd.	General Engineers ...	... ,	Wharfedale Foundry ...	Otley ...	Reliance, Otley	...
Forrest & Son, Ltd. ...	Engineers and Shipbuilders	... ,	Elworth Works, Sandbach	Manchester ...	Foden, Sandbach	...
			Shipyard , ...	Wyvenhoe, Essex;	Forrestiere, London
			101 Leadenhall Street , ...	London, E.C.	5942 Avenue

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Foster Brothers & Co. ...	Ironfounders	Hope Foundry ...	Preston	Hope Foundry, Preston	82
Foster, Sidney & Co. ...	(See <i>Sidney, Foster & Co.</i>)				
Foster, Wm., & Co., Ltd. ...	Agricultural and General Engineers	Wellington Foundry, Firth Road	Lincoln	Foster, Lincoln	18
Furneavall & Co., Ltd. ...	General Engineers and Ironfounders	Union Foundry ...	Haslingden	Furneavall, Haslingden	1
Furse, W. J.,	Electrical Engineer ...	17 Burton Street ...	Nottingham	Furse, Nottingham ...	539
 Gaukroger, Sykes & Roberts, Ltd.	Valvemakers, Brassfounders, etc. ...	Spring Hall Lane	Halifax	Brass, Halifax	204
Gibb & Hogg, Ltd. ...	Engineers and Ironfounders ...	Victoria Engine Works ...	Airdrie	Hogg, Airdrie	12
Grange Iron Co., Ltd. The	General Engineers ...	Grange Iron Works ...	Durham	Grange, Durham	5 P.O.
Grangemouth and Greenock Dockyard Co., The	Shipbuilders and Ship-repairers ...	... ... ...	Grangemouth	Dockyard, Grangemouth	11 Durham
Grocers' Engineering Co., The	Manufacturers of Tea, Coffee, Cocoa, etc., Machinery	Cole Street, Swan Street	London, S.E.	Metrical, London	760 Hop.
 Hart, David, & Co. ...	Engineers and Ironfounders ...	Wenlock Road, City Rd,	London, N.	Bascul, London	733 King's Cross
Hastie, John, & Co., Ltd. ...	Engineers	Kilblain Engine Works, Princes Street	Greenock	Hastie, Greenock	133
Hattersley, R. E., & Co. ...	Tool Manufacturers ...	Spring Hall Lane	Halifax	Brass, Halifax	204

Holding, John, & Co.	Engineers & Forging Manufacturers	Union Forge, Savile St.	Sheffield	...	...	...	...	...	268
Holmes, Henry, & Co.	Engineers' Toolmakers	Central Iron Works	Halifax	...	Holmes, Central Works, Halifax	...	...	...	113
Holmes, W. C., & Co.	Gas Engineers...	Whitestone Ironworks, Turnbridge	Huddersfield	...	Holmes, Huddersfield	...	...	...	...
Holroyd & Hall...	Patternmakers	Sackville Street	Bradford	...	...	...	...	...	...
Horn, Thomas, & Sons	Engineers and Millwrights	Gray Street, Waterloo Road	London, S.E.	...	Insurgent, London	...	...	...	...
Horsfall, Jonas ...	Machinist	Colne Road	Huddersfield	...	...	...	...	...	484
Hunt & Mitton ...	Engineers' Brassfishers	13-19 Oozells St., North	Birmingham	...	Mitton, Birmingham	...	...	...	394
Hunt, R., & Co.	General Engineers	...	Earls Colne, R.S.O., Essex	...	Hunt, Earls Colne	...	...	...	...
Iddow Brothers...	Engineers	Brookfield Iron Works, Leyland	Preston	...	Iddow, Leyland	...	...	...	504
Inglis, G., & Co., Ltd.	Engineers and Boilmakers	Albert Works	Airdrie	...	Boilers, Airdrie	...	...	...	15
Isles, Ltd.	Engineers, Ironfounders, and Crane-makers	Steam Crane Works	Stanningley, Leeds	...	Isles, Stanningley	...	...	...	45 Stanningley
Key, George	Cycle Manufacturer	Queen's Road	Nottingham	...	Kay, Nottingham	...	...	...	855
Keay, Thomas C.	Engineer	17 Baltic Street	Dundee	...	Keay, Dundee	...	...	...	344
Leadbeater Brothers	Hydraulic Engineers	36 Victoria Road	Leeds	...	...	...	...	...	1573
Lee & Hunt	Machine Toolmakers	Arkright Works, Crocus Street	Nottingham	...	Lee, Nottingham	...	...	...	246
Leeds and Bradford Boiler Co., Ltd., The	Boilmakers, etc.	Stanningley	Near Leeds	...	Boilers, Stanningley	...	...	...	44 Stanningley

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Lord, J. K. & R.	Boilermakers ...	Barnbrook Boiler Works ...	Bury ...	...	...
Lord, William	Boilermaker ...	Lord Street Boiler Works ...	Bury ...	...	0249
Lowca Engineering Co., Ltd., The	Engineers, Ironfounders, and Boiler- makers	Lowca Engine Works ...	Whitehaven	Lowca, Parton, Cumberland	88
Lund, Samuel, & Sons,	Ironfounders ...	Midland Foundry ...	Keighley	Lunds, Ironfounders, Keighley	142
Mackenzie Brothers	Ironfounders ...	Slateford Road ...	Edinburgh ...	Iron, Edinburgh	67 Western
M'Kenzie, J., & Co., ...	Ship and Boatbuilders and Re- pairers	44 Sandport Street ...	Leith	...	...
M'Keown, J. & J.	Ironfounders and Smiths ...	Grosvenor Street ...	Belfast	...	923
M'Willan, Archibald, & Co. ...	Coppersmiths and Brassfounders ...	Smith Works Shrub Place, Leith Walk	Edinburgh	Vacuum, Edinburgh	4043
MacTaggart, Scott & Co.	Hydraulic and General Engineers ...	Station Iron Works, Loanhead	Near Edin- burgh	Valve, Loanhead ...	12 Loanhead
Mallinson, J. & J.	Engineers' Toolmakers ...	Lucy Street, New Bank	Halifax	...	...
Mallinson Brothers (JOHN MALLINSON)	Machine Toolmakers ...	Hipperholme ...	Near Halifax	...	...
Marshall & Co. ...	General Engineers and Motor Car Builders	Belsize Works, Clayton Lane, Clayton	Manchester ...	Belsize, Manchester	1849
Martin, G. & W.	Engineers, Boilermakers, and Black- smiths ...	Oak Tree Iron Works, Regent Road	Aberdeen ...	...	...

Milburn, John ...	Engineer and Ironfounder ...	... Aspley ...	... Wakefield ...	... Workington ...	Milburn, Engineer ...	17 National
Mills, Edwin, & Son ...	Engineers ...	... 3 Vicarage Street	... London, S.W.	Omo, Huddersfield ...	Huddersfield ...	251
Milthorpe, G. & F., Ltd.	Printers' Engineers and Printing	39 Victoria Street, West-	... Miltorp, Wakefield	Miltorp, Wakefield	Miltorp, Wakefield	75
Moffatt & Eastmead, Ltd.	Ink Manufacturers	minster	... Hoistway, London	Hoistway, London	Hoistway, London	...
Moorwood, Sons & Co., Ltd.	Engineers, Ironfounders, and Cook-	Harleston Iron Works ...	... Moorwoods, Sheffield	Moorwoods, Sheffield	39, 2298, and	39, 2289
Muir & Findlay	ing Apparatus Manufacturers	Parkhead Boiler Works	... Glasgow	... Glasgow	Endurance, Glasgow	2634
Mumford, Arthur G. ...	Boilermakers ...	... Culver Street Works	... Colchester	... Mumford, Colchester	Mumford, Colchester	...
Musgrave & Co., Ltd.	Engineer ...	... St. Ann's Iron Works ...	... Belfast	... Musgrave, Limited	Musgrave, Limited	68
Musker, C. & A., Ltd.	Ironfounders and Ironfitters	Dundas Street, Bootle ...	... Liverpool	... Fulgor, Liverpool ...	Fulgor, Liverpool ...	104 Bootle
Neill, W., & Son ...	Hydraulic Engineers ...	...	...	...	...	...
Newsome, William, & Son ...	Engineers, Boilermakers, Iron and	Bold Iron Works,	St. Helens Junction	Neil, St. Helens ...	20 St. Helens	...
New Steam Stamp Mill Syndicate, Ltd., The	Brass Founders, etc.	... ...	Sowerby Bridge	Newsome, Sowerby	39	39
Newton & Bean ...	Manufacturers of Steam Stamp and	Hereford St., Ordsall Lane	... ...	Bridge	Bridge	...
Newton & Pycroft ...	Ship Repairing Work	Reg. Office: 34 Crowther	Salford	Vortex, Manchester	2733	...
Nicholson, W. N., & Sons, Ltd.	Engineers and Ironfounders	Street, Regent Road	Salford	... ...	...	...
Nicholson Tool Co., The Jos. C.	Lace Machine Builders	Dudley Hill	Bradford	... ...	...	...
Northern Engineering Co., The	Engineers ...	... Alfred Street Mills	Nottingham	... ...	...	...
	Machine Tool Manufacturers	... ...	... Newark-on-Trent	... ...	...	...
	Engineers ...	... Collingwood Street	... ...	... ...	...	...
		Works:—City Road	... ...	... ...	...	...
			... Halifax	... Neco, Halifax	...	...
					...	270
						239

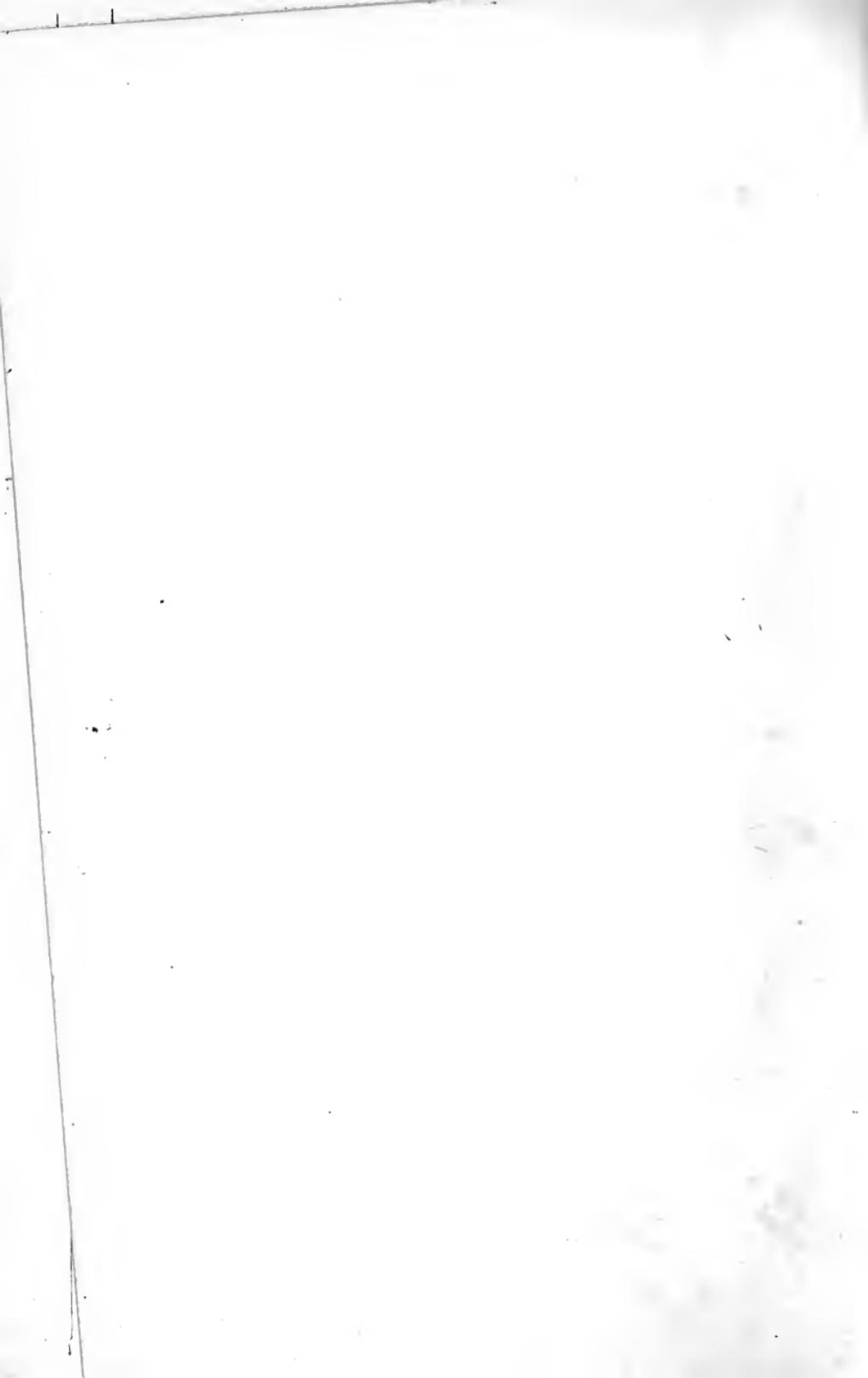
NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Oldfield & Schofield ...	Engineers' Toolmakers	Central Iron Works ...	Halifax	... ... ...	121 National
Parkinson, Thomas ...	Brass and Ironfounder and Machinist	Britannia Works, Canterbury Street	Blackburn	... ... ...	15
Park, W., & Co. ...	General Engineers	... ...	Wigan	... ... ...	67
Parson's Marine Steam Turbine Co., Ltd., The	Marine Engineers	Turbinia Works ...	Walsend R.S.O.	Turbinia, Walsend	220
Partington & Co. ...	Boilermakers	... ...	Bradford	... ... ...	198
Pattison, E., & Co. ...	Ironfounders	St. Peter's Lane ...	Leicester	... ... ...	648
Peberdy & Earp ...	Machinists	Farnham Street ...	Leicester	... ... ...	...
Penman & Co. ...	Boilermakers	Strathclyde Street, off Dalmarnock Road	Glasgow	... ... ...	2544
Peppermill Brass Foundry Co., The	Brassfounders	... ...	Wigan	... ... ...	19
Piercy & Co. ...	Engineers and Ironfounders	Broad St. Engine Works and Oozells St. Fdy, Atlas Works, Spring Hill	Birmingham	Piercy, Birmingham	20
Piggott, Thomas, & Co., Ltd.	Engineers	Lionel Street	Birmingham	Atlas, Birmingham	86
Player, W. J. ...	Engineers	Atlas Works	Burnley	Players, Birmingham	1310
Pollard, James ...	Iron and Brassfounder and Millwright	Sandiacre ...	Near Nottingham	Pollard, Atlas Works	94
"Premier" Gas Engine Co., Ltd., The	Gas Engine Manufacturers	Albert Foundry, Jane St.	Leith	Premier, Sandiacre	39 Long Eaton
Primrose & Co. ...	Ironfounders	... ...	... ...	... ...	4189

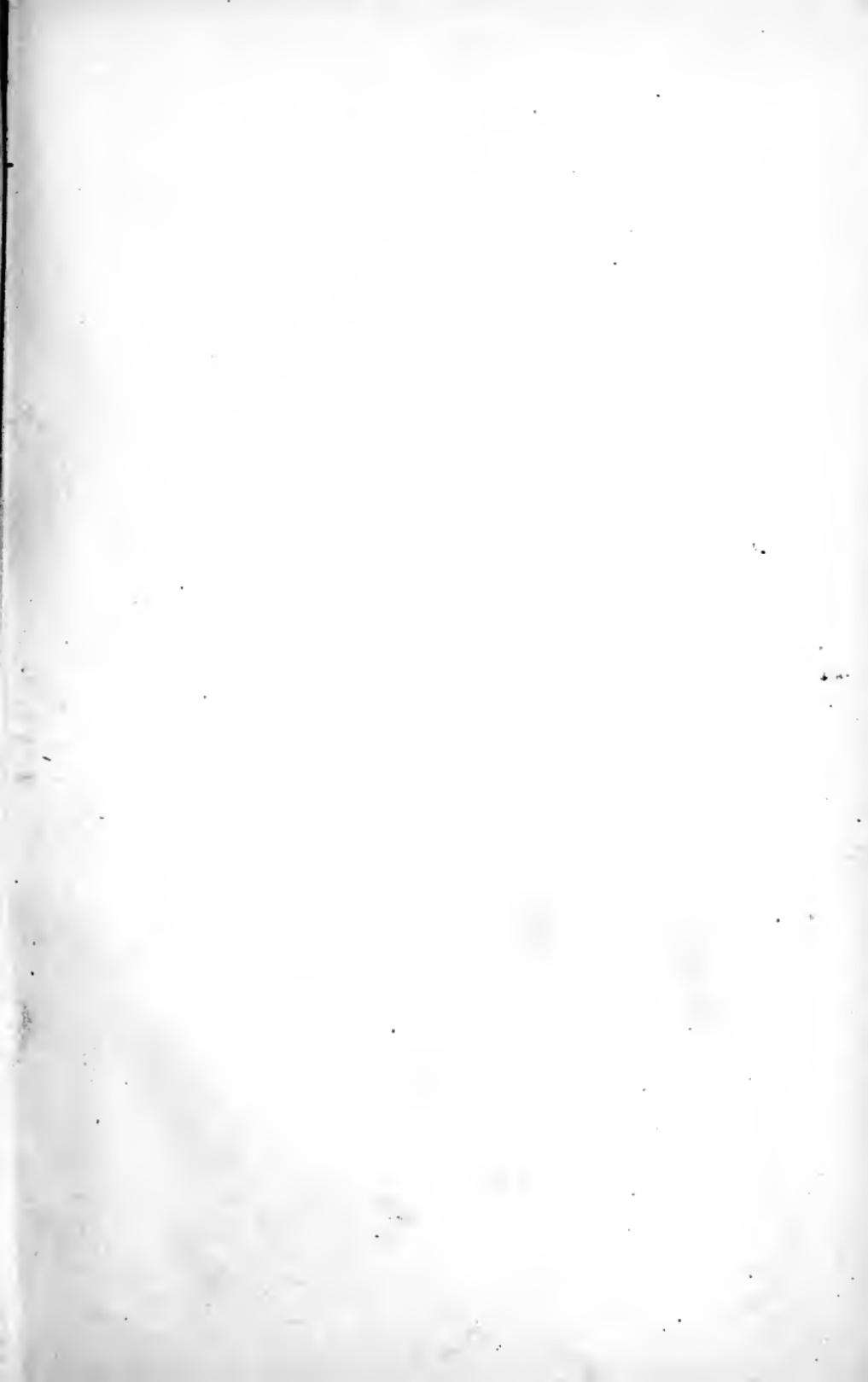
NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Shaw, W., & Co. ...	Steel Founders ...	Wellington Foundry ...	Middlesbrough	Wellington, Middlesbrough	106
Sidney, Foster & Co. ...	Patternmakers ...	St. John's Works, Lister Lane ...	Tees Halifax	... ... ...	...
Simpson, Strickland & Co., Ltd. ...	Engineers ...	... ... ...	Dartmouth	Engineers, Dartmouth	2
Smith Brothers & Eastwood ...	Engineers ...	... ... ...	Bradford	Engineers, Bradford	1143
Smith's Injector Co., Ltd. ...	Brassfounders ...	Station Street ...	Nottingham	Injector, Nottingham	146
Snowden, John ...	Boilermaker ...	Kingston Boiler Works, Oxford Street ...	Hull ...	... ... ...	508
Spurr, Inman & Co., Ltd. ...	Boilermakers ...	Caldervale Boiler Works ...	Wakefield	Spurinman, Wakefield	37
Stanford & Co. ...	General Engineers ...	High Street ...	Colchester	Stanford, Engineer, Colchester	...
Stewardson & Co. ...	Coppersmiths and Brassfounders ...	Albert St., Leith Walk ...	Edinburgh	Stewardson, Edinburgh	169
Stirling Boiler Co., Ltd. ...	Boilermakers ...	2 St. Andrew Square ...	Elgin	Coppersmiths, Elgin	24
Summerscales, W., & Sons, Ltd. ...	Laundry Engineers ...	Phoenix Foundry ...	Keighley	Evaporate ...	1256
Swift & House ...	Engineers and Ironfounders ...	Union Foundry, Pemberton	Near Wigan	Phoenix, Keighley	92 Keighley
Taylor, Charles ...	...	...	...	...	...
Taylor, C. H., & Son ...	...	...	...	...	...
Taylor, Charles ...	Machine Toolmaker ...	...	Birmingham	Lathes, Birmingham	401
Taylor, C. H., & Son ...	Ironfounders ...	...	Leeds	...	116
	Cyclops Foundry ...	...	Cyclops Foundry	...	...

Wadsworth, William, & Sons	Millwrights and Machinists ...	School Hill	... Bolton	... ...	171
Tillotson, Fred. ...	Ironfounder ...	... Otley Road	... Shipley	... ...	...
Tindall, Earle & Hutchinson	Engineers, Boilermakers, etc.	... Vulcan Ironworks	... Hull ...	... Vulcan, Hull	380 National
Thomson, David	Engineer ...	... Slateford Road	... Edinburgh	... ...	...
Trall, Robert, & Co. ...	Ironfounders ...	... Vulcan Foundry, Bonnington Road	... Edinburgh	... ...	...
Travers & Co. ...	Engineers and Ironfounders	... Britannia Works ...	... Belfast	... Travers, Belfast	582
Turner, E. R., & F., Ltd.	Manufacturing Engineers ...	... 82 Mark Lane ...	... Ipswich, London, E.C.	Gippeswyk, Ipswich Canvassers, London	24 Ipswich
Turner, J., & Richardson	Machine Tool Makers ...	... Bowling Green Tool Work, Well Lane	... Halifax		
Vulcan Foundry, Ltd., The ...	Locomotive Builders and General Engineers	... ...	... ...	Newton-le-Willows, Lancashire	4
Vicars, T. & T.	Manufacturers of Biscuit Machinery, Oven and Mechanical Stokers	... ...	... ...	Earlestown, Newton-le-Willows, Lancashire	...
Varley, John, & Co. ...	Ironfounders Waterloo Foundry, Atlas Street	St. Helens ...	Varley, St. Helens	43

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				TELEGRAPHIC ADDRESS.	TELEPHONE NO.	
Ward Brothers ...	Machine Makers (Dobbies and Accessories)	Ingham St. Iron Works	Blackburn	360
Ward, H. W., & Co.	Machine Toolmakers	Lionel Street	Birmingham	Tudor, Birmingham	1469	
Watt, James, & Co. ...	Engineers	Soho Foundry	Birmingham	Watt, Soho, Smithwick	2034	
Webb, Joseph, & Co. ...	Forgemasters ...	Irwell Forge and Rolling Mill	Bury ...	Forge, Bury	72	
West's Patent Power Tyre-Setter Syndicate	Hydraulic Engineers ...	140 Thornton Road 23 College Hill, Cannon St.	Bradford London	Acrostical, Bradford Acrostical, London	1634	Bradford
Whitehead & Co. ...	Torpedo Manufacturers	Portland Harbour Torpedo Works	Weymouth	Whitehead, Wyke Regis, Weymouth	6	
Whitmore & Binyon, Ltd. ...	Millwrights, Engineers, etc.	...	Wickham Market	Wickham Works, Wickham Market		
Winn, Charles, & Co. ...	Engineers and Brassfounders	Mark Lane, St. Thomas Works, Granville Street	London	Accelerate, London Winn, Birmingham	366 and 1437	
Winter, Thomas, & Co., Ltd.	Engineers, Toolmakers, Brass and Ironfounders, and Coppersmiths	Byron Street and Canterbury Street	Blackburn	Automatic, Blackburn	87	
Woodhead, William, & Co. ...	Engineers' Toolmakers	...	Halifax	...	...
Woodhouse & Co. ...	Brass and Ironfounders	...	Doncaster	Woodhouse, Don- caster	4	
Worthington Bridge and Boiler Co., Ltd.	Manufacturers of Bridge-building Plant, etc.	...	Workington	Marley	...	29 Workington
Wright, Edward ...	Engineer	15 Gordon Street	Bradford	...	...	1316
Wright, J. & T. ...	Engineers and Ironfounders,	Platt Bridge	Near Wigan	...	...	...
Wright, Samuel ...	Ironfounder	Havelock Street ...	Leicester	...	...	96

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	ADDRESS.	NAME.
<i>Addendum.</i> Omitted from "48 Hours'" List :— Hawthorn, R. & W., Leslie & Co., Ltd.	Marine Engineers, Locomotive Builders, and Shipbuilders	Forth Banks	... Newcastle-on-Tyne	... Locomotive ... Tyne	1232 Nat. 413 P.O.





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